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THE ARTIST IN WARTIME

by Kenneth John Conant

Thirty-three years ago my parents sent me back from the Middle West to pursue my education in one of the great institutions of Massachusetts. When I completed my course of studies, I found myself, like many of our graduates today, a young artist ready to start life in an America in war, and in a world where the flames of hatred and destruction were burning more fiercely every day.

A thoughtful person in such a world--I then, and our young people now--naturally takes stock of the situation, and, as an honest citizen, tries to find his place among his fellow men. A thoughtful artist may ask, "What is the use of art in wartime? Have my years of training and sacrifice come to nothing because we find ourselves in an age of violence? Is there anything vital which an artist can contribute to an era of battle? Is art real after all, when these more sombre realities weigh so heavily on the spirit?"

My counsel to the artist is that he should take courage for his calling. Peace acknowledges the artist as one of the prime agents of civilization, but it is in wartime that he receives his greatest compliment. At the very threat of hostilities there is a rush to protect works of art from the violence of invasion and the accident of battle. Galleries are stripped of their pictures and statues. Sandbags are piled high against the walls of lovely old buildings. Stained glass windows are hurriedly removed to places of safety. Sometimes this work of salvage is done under trying conditions, as at Reims during the last war, when firemen from Paris, climbing about the cathedral like cats, suspended perilously from ropes while the invaders were actually bombarding the building, succeeded in saving about half of the wonderful medieval glass. The Spanish Republicans in Barcelona secularized the cathedral to save it from their anarchist companions, and stripped it to save its art treasures from the fascist bombers. In other cases the salvage operation is prepared in advance--great bomb-proof cellars, for instance, were built in the new wing of the British Museum where the Parthenon marbles are, so that these and other previous mementos of antiquity might be placed in safety when the new menace of aggression came.

Now, if anything is clear, it is clear that this effort is made because people prize their artists' work as an embodiment of their history, their traditions, their civilization. They realize that the artist speaks to them and to the ages in a universal language. The art object is not merely an object of value: it is a part of humanity's birthright. Destruction of this legacy incurs universal reprobation because it violates the deepest feelings of mind and heart among civilized and primitive people alike. We all realize that the destruction of a work of art closes a window through which we might look into the life, the intelligence, and the spirit of another age.

Humanity, then, pays the artist the compliment of considering his work a priceless heritage. And he has work to do in periods like the present great epoch of struggle, which has deeply stirred the social

consciousness; vast movements of popular emotion clamor for expression, and the artist, if he is to do his duty by his own age, must create the forms by which this age will henceforth be known. The world would be poorer if the artists of the past had not risen to this challenge. Examples come easily to mind. The slabs which depict the ruthless military terrorism of the ancient Assyrians; the ceramics of the redoubtable Persian archers, who were as effective as dive-bombers in their day; the battle carvings of the Egyptian and Greek temples; the Roman spiral columns and commemorative arches which recount the progress of the legions; the Crusader tombs; the emotionally charged Goya paintings of incidents during Spain's struggle for liberty early in the nineteenth century; the unforgettable Raemaekers drawings of Belgium a quarter-century ago; the Picasso Guernica, which breaks upon the mind like the shattering of glass -- all are genuine documents of first-rate historical importance. And even ephemeral works like Roy Baldrige's studies of soldier life in the American Expeditionary Force, which made their newspaper, "The Stars and Stripes," so famous, have their great value. It is, then, no accident that artists are actually commissioned for the army, for the military realize that the artist, as well as the fighting man, has important work to do in wartime.

To these words on the past and the present, I should like to add some observations on the dynamic artistry which moulds the future. Wartime, with its immense dislocation of forces, its unchaining of often unsuspected energies, offers an uncommonly wide opportunity to the alert and inventive artist. If he can read the situation aright, and operate a true work of artistic coordination, his work will affect whole generations of artistic enterprise. For an apt example, I may go to my own field, architecture. How many realize that the new functional architecture is just such a war-born art? It owes its existence to engineering developments that came out of wartime conditions in eighteenth-century England, and its special character to generations of artists who struggled to give artistic content to what was, in the beginning, merely an engineering expedient.

Many people fail to see art of any sort in the radical new abstract buildings. "They look like factories," is the adverse judgment of these critics, and in this the critics are right. These critics have no sympathy for a factory-like architecture; and in this they are wrong, for this architecture is now well established for all types of building. It has in fact been the only vital, growing architecture for a century and a half of this industrial age. It has advanced continuously on its own merits during all that long time. It is a satisfying product of our own age, there is no doubt about that. It is fireproof, made up of units which we find it easy to fabricate and assemble; really admirable interior space effects are possible, and these spaces are easy to divide according to convenience. Excellent lighting effects are easy to arrange, and they may be varied with ease. Mechanical contrivances and other utilities are easy to install. Such a building may be open or shut, high or low, wide or narrow, short or long.

How then, if the factory is such an admirable creation, can it be derogatory to another building to say that it is like a factory? Can not the good qualities of the well-designed factory be used in all types of building? "Handsome is as handsome does," the proverb says, and on that basis we may call factory construction the ugly duckling of modern architecture.

From this I draw the conclusion that our forward-looking artists and architects owe it to themselves and to the public to understand this architecture and interpret it to the conservative-minded. They owe it to themselves and to the public to develop factory-type construction to the point where it will artistically deserve to be used for houses, clubs, schools, office buildings, and the rest. To the unpoetic factory construction the artist must make the precious gifts of his artistic poetry and his ideals of beauty. The decorator must discover how to handle the exterior lines and the interior spaces which result from modern structure. The painter and furniture designer must produce works of their craft which will fit into these ensembles, for they develop out of, and are natural to, the conditions of our existence.

The story of this war-born new architecture is more interesting than one might suppose. It came about as a result of the great duel between France and England which was ended by the peace of 1763. Our French and Indian war, during which George Washington received his military training, was only an episode in this struggle. When it was over, and English arms were victorious, the English metallurgical industry found that it had no more cannon and cannon-balls to make; and as an outlet they went into the building game. It was the very time when the foundations of modern industrialism were being laid by Arkwright, who built his first cotton mill in 1768, and by Watt, who invented the steam engine in 1769. The need for unobstructed factory halls of fireproof construction gave the foundries an opportunity to supply metal columns, slender and strong, and metal beams to carry floors of brick. Thus the familiar criss-cross of metal framing came into existence--a basically new architecture for a new social organ. Not as yet a poetic architecture, but a revolutionary architecture which artists have made poetic. In the 1770's there were excellent solutions, in conventional polite architecture, for the social needs of the time. Now, in forward-looking work, solutions derived from factory architecture have superseded them all.

What is the nature of this revolution? In the metal-framed factories the world saw, for the first time, a practical, open, fire-safe, post-and-lintel architecture. The thing is so common now that we realize with difficulty how unheard-of it was in the 1770's. Anyone who has seen a skyscraper under construction has seen this scheme used as a matter of course. He will have observed that the framing marks off, as it were, crate-fulls of space, and that these framed space-units, added to one another, make the interior space of the building. Never until modern times was this type of space-building possible in fireproof construction, and the use of it has been increasing ever since it was first invented. The first artistic use of space-crate construction was in a bridge at Coalbrookdale in England, in 1779. Here the space-crates were bowed over to form an arch; but soon metal bridges took on special forms, and bridge-like spans were used before long to create wonderful new open interiors. But it was not until nearly 1850 that metal was used undisguised for the ceilings of "polite" architecture. The first man to use it so, in a Parisian library, was Henri Labrousse, whose work was known to our own Henry Hobson Richardson, designer of Trinity Church. Surely Richardson took some of his greatness from the great Frenchman.

In 1851 the first modern exhibition hall was built--the famous Crystal Palace by Paxton, in London, which had the added revolutionary feature of walls in metal and glass supported on the framework. From that time on, the new space-block architecture was free of servitude to the old-fashioned masonry wall, and this made an astonishing development

in efficiency. In Roman buildings, about 1/5 of the area must be given up to solid supports in a fire-roof building. Even a Gothic cathedral must give up about 1/6 of its area in this way. In the Crystal Palace only 1/2200 of the area was given up to solids; 2199/2200 of the building was usable interior space.

"Not architecture!" said the conservatives of the Crystal Palace. "Such things, if persisted in, will be the death of architecture," they said when, beginning in 1884, the Americans piled up space-blocks into skyscrapers, and made them really fireproof. But great and sensitive artists like Louis Sullivan knew better. In 1890, he designed the first of the really beautiful skyscrapers, and--this is important--applied his new skyscraper style to a house and to a tomb design. That is to say, a great artist took the factory-born style and applied it to types which had heretofore been considered the monopoly of the older polite architecture. A few years later, and Frank Lloyd Wright was making dynamic poetry of space-block architecture in a magnificent series of domestic, industrial, and ecclesiastical designs. He gave citizenship to the new architecture in the places where men's spirits love to dwell.

In 1925, Walter Gropius built his famous Dessau Bauhaus, an academy of building art, which has been accepted as a paradigm of the new architecture. At that time, the new architecture was being widely used in Germany in the solution of the terrible housing crisis which resulted from conditions after the German defeat in 1918. The great artists, architects and engineers who developed their opportunity at that time brought the new architecture home, quite literally, to thousands upon thousands of people, and the influence of their work has spread to housing projects which now shelter millions of people all over the world.

I submit that this "success story" of factory architecture has its lesson and its message of hope for the artist of these days. He should cherish and understand the past, and he should interpret his own age; if he is alert and forward-looking, he can help to form the art of the future. If he is true to his highest calling, and gives sincerely of his best gifts, he will transfigure the art of the present day so that it may be worthy to stand beside the art of antiquity and the middle ages. If our artists do their work supremely well, our age may have something to offer before the judgment of God which will help to efface the blood-stained record page which grows darker every day. We need the artist to redeem us.

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CORRECTION ON LEDOUX

Dr. Emil Kaufmann points out that in his article on "Claude-Nicolas Ledoux, inaugurator of a new architectural system," that by editorial inadvertence the second sentence on page 16 of our last issue (v.3, no.3, July, 1943) was misleading and that it should read, "He did not progress step by step like a carefully elaborated course in architecture."

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THE PHILIPSE CASTLE RESTORATION AND ITS LESSONS

by Hugh Grant Rowell

In 1683 Frederick Philipse came to Slaapering Haven, where the Pocantico River enters the broad Hudson, here known as Tappan Zee, and erected his early pioneer industrial settlement. Philipse, the outstanding figure during both the Dutch and English ownerships of the Greater New York area, centered his settlement around his "Castle" (a fortified residence of distinctly advanced nature built of field stone and mud mortar), his large grain mill with its enormous storage spaces (later famous as the "Old Mill of Sleepy Hollow"), and his church which, though the date is disputed, is believed by the writer to be earlier than usually claimed, and which is now the oldest active church in America.

Later Philipses, now thoroughly Anglicized, transferred their major interest to the manor house at Yonkers. In 1785, the entire manor, extending from Spuyten Duyvil Creek, north to the Jroton River, and from the Hudson east to the Connecticut line, with additions, was attainted and sold, principally to erstwhile tenant farmers. The district around and including the Castle and mill was sold to Gerard G. Beekman, whose wife, the patriotic Cornelia Van Cortlandt, was the sister of one of the Commissioners. The property remained in Beekman hands until 1835 when the "Widow" Beekman laid out "Beekmantown"--the present village of North Tarrytown--as a real estate development and sold small lots for a hundred dollars. After the widow's death, about 1850, the property was owned by various important and colorful persons until it came, in the late 1920's, into the possession of a local bank.

On February 10, 1940, when one day more might have been too late, the property was saved from a fate worse than oblivion, and, as the result of widespread local pleas, by a dramatic gift of fifty thousand dollars from Mr. John D. Rockefeller, Jr. It is no fiction that many who truly loved the old place actually wept at its rescue. Around 1900, the property had been offered for preservation, but not until Mr. Rockefeller's interest took concrete form were the necessary funds forthcoming.

Now the Castle could be repaired in the ancient manner, and it soon became evident that the Old Mill, which had been demolished in the

Dr. Rowell, before his retirement, served many years on the medical faculty of Columbia University. He has done considerable research on illumination and certain phases of building construction. As an avocation, he has studied and written extensively on antiquarian subjects. As president of the Historical Society of the Tarrytowns, and as Director of the Philipse Castle Restoration, he writes with authority concerning the aims and methods employed in that important work.

early nineteen hundreds, could be rebuilt as well. On July 27, 1940, Mrs. Worcester Warner and Miss Helen Warner gave the necessary sum for this purpose. The large storage spaces within the mill now provide accommodations for social activities, a function that finds precedent in its earliest reported use, for local gatherings, before the erection of the Old Dutch Church.

So, on May 2, 1941, the contract was signed for work dealing with the Castle, the Old Mill, and the seventeenth-century Dutch Smoke House. On July 4, 1943, the ninetieth anniversary of the local Captors' (of Major Andre) Monument, four thousand local citizens--the second largest assembly ever gathered in the community--attended the opening ceremonies and expressed unanimous approval of what had been done. Through press and news reels, the ceremony and restoration won favorable publicity in every part of the continent. On January 1, 1944, at the end of the first six months, despite increasing difficulties of travel and pandemics, over eight thousand visitors, representing almost every state in the Union and over a dozen foreign lands, had inspected the Restoration. Its ready accessibility to New York City indicates that an overwhelming number of tourists and native Yorkers can be expected as soon as international affairs take a constructive turn.

Purpose of this article.

This article, developed at the request of the editor of the Journal, is intended to discuss very frankly our experiences at the Restoration, with the hope that it can, by being open-eyed, critical, objective, and impersonal--a sharing and a warning-- help those who will be charged with the numerous preservation projects that seem imminent in the post-war period.

The meaning of "Restoration"

While the European mind understands clearly what the term "Restoration" implies, the same is not true in this country. Too often the word is simply a placebo for the owner of an old house, who repairs it to conform somewhat to its period, but who sacrifices detail to convenience or whim. The term should not be applied to ancient and historical buildings where mere preservation does not achieve full restoration. Frankly, before complete "technical restoration" is decided upon, it is necessary to justify the expenditure of funds, time, and effort in terms of eventual results. It is sufficient, for example, that most old houses be simply repaired and maintained. Many others warrant no more than a marker; and some scarcely deserve that much attention. The public has come to regard these old houses as something for which one plans fifteen minutes for a visit and then leaves after five, having seen and known all.

The writer's definition of a "technical restoration" is one that "first of all, requires the accurate reproduction, on the exact site, of a certain sector of history in which persons of consequence and interest lived and moved. The initial stage is, of course, research, which must be both wide and deep. Then comes the development of the scene by construction and landscaping. In it, buildings may be restored or repaired (as was Philipse Castle), or reproduced full scale (as was the Old Mill). Next, there must be added the life and living of the time and place, so realistically repeated that the visitor is actually carried back, visually and mentally, in complete abandonment of the present, to the era selected. Literally the clock is turned

backward. Such a program is ambitious, expensive, and fraught with almost insurmountable difficulties. Almost never can a full technical restoration be completed."

"Truth beareth away the victory." This is the principle which should compel all technical personnel, on the one hand, to make sure that no necessary and basic professional tenets are violated, and, on the other hand, to exert the utmost ingenuity in their work, since the result must always appear, at least, to reproduce the ancient situation. Many professional persons of high standing and qualifications, and many first-class workmen are unfitted for restoration work because they lack versatility, ingenuity, and flexibility.

The Northern Counterpart

We have in this country two achievements fulfilling the definition of "technical restoration:" Colonial Williamsburg, the pioneer; and the Philipse Castle Restoration, which may well be considered the proof of the pudding, for in technic and philosophy it follows Williamsburg methodology and tenets. In the writer's opinion, PCR emerged as an ideal counterpart and field laboratory of the larger, original Williamsburg restoration. Both undertake to recapture a whole community, not just an isolated building, although fortunately for us PCR was on a much smaller scale.

But beyond this basic similarity, the contrasts are striking. Colonial Williamsburg was a Southern capitol and social center, where English gentlemen dwelt and decked themselves in unparalleled nicety and extravagance, surrounded by the slaves and craftsmen who served them. In the pioneer industrial settlement, on the other hand, set in the forest glades of the Manor of Phillipsfurgh, the sturdy, thrifty Dutch (even under the British Crown) lived well, yet frugally, nobly, yet conservatively, and in an atmosphere possibly even more cosmopolitan than that of their southern contemporaries. (Actually the Castle is slightly earlier than any Williamsburg structure.) And even in the field of archeology, despite many similarities, surprising contrasts appear. These we will discuss presently.

Basic Organization and Administration

The highly departmentalized organization developed at Colonial Williamsburg was not only splendidly coordinated, but also successful in its allocation of fundamental functions. Application of such a set-up to smaller projects, like the adjustment of a standard organization pattern to school systems in communities of various sizes, demands consideration of services to be performed rather than personnel. Obviously PCR required the same services as Williamsburg, but on a much smaller scale.

Stated broadly, the three essential functions to be accommodated were research and planning, finance, and physical creation, including construction, landscaping, furnishing, etc. A subsequent function, that of operation, appears as the project nears completion and "Sidewalk Superintendents" give way to income-producing guests.

A complex situation of this sort, extending over a period of years and undergoing internal changes which some would call progress, recalls the planning, construction, and operation of a large ship. Here it is the custom to select the master at the beginning, and literally allow

him to grow up with his ship. The implication is that there must be, from the outset, leadership of the highest type. More and more, the writer is unwillingly convinced that the original leader, if successful at all, must consider the job as a terrific responsibility to be borne over a period of years.

The coordinator, under whatever title he presides, or perhaps with none, makes or breaks the project. To be very undiplomatic, it is increasingly evident in such projects that no profession, per se, qualifies an individual to assume this role. The requirements for it seem to include: a wide diversity of knowledge and an ability rapidly to acquire vastly more; an ability to keep ahead of the project, which demands thoroughgoing objectivity; and a willingness to sacrifice persons, things, or ideas that fail to evoke truth. Such a coordinator needs dictatorial powers, but also the ability to secure results by less drastic means whenever possible. He must always be prepared to lead the work through the next stage, and, at the same time, to plan the one after that. Fundamental, too, is the ability to distinguish between fact and fiction, research and unsound opinion, and true and false economies.

Research

It is perfectly obvious that the hub of the project lies in the program of research. In such restorations, the field of research is so broad that it is continually necessary to seek out those who have made more or less sound and comprehensive studies of minutiae. Such persons may live today only in their writings. They may--and more often than not do--turn up as a result of publicity emanating from the project. Often they are enthusiasts, just as the true restorationist is a hobbyist at heart; otherwise the trials and tribulations would swamp him. And so, in a broad way, the research involves a happy congregation of high-type hobbyists, which imposes, alas, the necessity of subsequently analyzing their opinions in microscopic detail.

Those who must face the gathering of such minutiae are continually surprised by the superficiality of available information on matters antiquarian and historic (except in political history), and by the undocumented cocksureness of supposedly informed persons. This is as true in the theatre and the moving pictures as in modern three-dimensional presentations of social history. Although the explanation for this is well known to scholars and need not be discussed here, the point is raised in order to highlight a statement by one of PCR's soundest advisers, who also pioneered at Williamsburg. To paraphrase, he says that to restore a building properly, one must be able literally to step into the mind, personality, and preferences of the person who built the structure, or for whom it was built. Actually, at PCR, such characterizations were made of both Frederick Philipse, the first owner, and the widow Beekman, the colorful heroine of the second group of residents. In other words, a restoration must tell a human, as well as a mechanical, story. Rightness is based on this yardstick.

It must be noted that research will continue throughout the project. That the very process of repair often reveals hitherto unavailable evidence was shown at the Castle, where, for the troublesome east elevation, the building itself provided proof that early historians had guessed or had been misled. Since research is concurrent with construction, it is unfortunate, but unavoidable, that new evidence will cause upsets and additional expense.

Continuing analysis inevitably leads either (1) to a stranger conviction that the evidence has been correctly interpreted, or (2), when a detail is challenged for any reason, to changes dictated by a review of all existing pertinent facts.

As a most profitable and illuminating example of the emergence of a firmer conviction we may cite the verification of the Castle as a trading post. Philipse was a man of the greatest wealth, and most cosmopolitan. Ocean-going ships actually came to the Old Mill dock, and as time went on its location became clear. Excavation combined with the study of old maps and pictures revealed the existence of a good harbor. Shards from the bed of the mill pond, too numerous to be the waste of one household, indicated, therefore, the breakage from cosmopolitan cargoes intended for persons of wealth. Thus, they proved once again the trading post theory. In a similar way, continuing experience with the house strengthened original convictions as to the use of rooms and their furnishings.

Conversely, the east elevation of the Castle could not be worked out on the basis of Lossing's famous drawing which was said to have been obtained from the family who occupied the house in his time. The true clue, however, was obtained in a painting dated circa 1640, and then the jigsaw puzzle fitted together nicely.

Logically, the collation of research in a project such as PCR should eventually produce documentary material of great value for those who deal with social history. Field notes, photographic records (both still and moving), bibliographical materials, maps, etc., require assembling into a coordinate whole, and this must be done while the situation is comparatively fresh in mind. Moreover, to encourage continuing research on the structures themselves, vision panels have been installed at PCR, following a European practice which has been avoided in this country for fear of marring decorative effects. Through these panels, scholars and interested persons may inspect generous samples of untouched, original work. In one instance even, preservation of invaluable exteriors of 1683 and 1785 led to the addition of a gallery to the Castle in order to conserve forever these priceless examples of early work.

In such a program of coordinated research, it is obvious that individuals seeking personal publicity at the expense of a large group of cooperators must be curbed as early as possible by a clear understanding as to the ownership by Restoration authorities of all drawings and data.

Finance

PCR began simply as a repair and preservation project. At no stage was the work allowed to advance beyond financial safety. At all times, funds had to be actually in hand not only to complete some specific phase, but also to ensure, in any eventuality, the housing of the historical society and its activities.

From the first, a system of accounting was set up by an expert, making it possible at all times to know the exact financial picture. Individual officials were carefully protected by requiring multiple signatures on all orders and disbursements. Very comprehensive monthly reports, closely tied to construction operations, facilitated clear

and constant control. Such procedures are not only necessary to administer the projects, but they also create confidence in the minds of donors as evidence of a strict desire to conserve funds in every reasonable way. And because restoration work is little understood by most financial patrons, it is important to be certain that all steps taken are clearly justifiable, necessary, sound, true, and in the end the most economical.

As a project emerges from the construction to the operation stage, obviously another type of budget building is necessary. Cost accounting and experimental operations, carefully watched, are required. At PCR, a Division of Research and Planning, wholly separate from Operations, plans further construction stages both for buildings and furnishings, and current archeological studies of the entire property.

Compliance with various tax regulations requires the establishment of methodical bookkeeping, which basically is very good for such a project, and also makes it possible by attendance statistics to measure the effectiveness of publicity. This, in turn, affects operation personnel, both as to numbers and types.

Thus, the logical conclusion appears to be that restorations are obviously businesses, and that they cannot even be created, much less operated and maintained, unless the same planning and procedures are available as are used in much larger and more profitable corporations of the highest type. Conversely, it is increasingly evident that this is the only kind of organization which in the future can expect to attract from donors funds sufficient for such expensive projects.

Physical Creation

After research has revealed sufficient evidence on which to base plans, the time comes for drafting. Large sums spent on this phase save even greater sums by avoiding actual mistakes in construction. As many have learned from bitter experience, nicety and accuracy of detail are not attained by working from rough sketches. These, alas, are sometimes very difficult to convert to scale working drawings. For example, the Smoke House chimney had to be redrawn many times to get the final desired effect. Here is typified a very serious and constant problem, that of coordination of mechanical requirements and artistic effects.

Eventually the time comes for letting the contract. Experience at PCR indicated that the right contractor is more important than price. Since such jobs are not commercial, a contractor and subcontractors must be found who can operate on a non-commercial basis. In such work, the coordination of trades and other efficiencies dear to the modern builder are always in danger of going out of gear, because of the necessity of always telling the truth. This means changes tomorrow on the basis of today's evidence, even if the plasterer is expected. In the writer's opinion, these projects operate on a cost-plus basis regardless of the terms of the contract. Even an upset (a guaranteed maximum) price gets upset as often as not. It follows that mutual faith and understanding are about all that keep contractor and coordinator (functioning as "owner") from each other's throats.

It is almost essential that the coordinator be in constant attendance on the project. Decisions made by his technical assistants seem to have a gift for failing to face the archeological evidence. Their

training makes it almost impossible for the situation to be otherwise. In other words, the professional personnel becomes fully effective only under the coordinator. They tend to have too much give-and-take when the project requires that a definite position be proved and firmly held.

Work has to be done and redone. Commercial standards are too liberal for restoration work. All this implies the most careful kind of specification writing, and experienced superintendents who let exactly nothing get by. Workmen actually prefer it this way.

The decorative phases of restoration, mouldings, colors, etc., would require volumes to discuss. There is a danger of too great liberality of thought and too much eagerness to get on to something else. The beautiful is not always the true.

When it is time to plan the landscaping, again the factual data assembled by the research staff must be utilized. At PCR, the landscape expert spent over a year in personal research and study of the property before starting actual work. Then, at the last moment, due to the discovery of the original dam of 1683 while checking a seemingly unimportant group of stones near a well, the entire plan had to be changed. Nowhere has the value of sound and sympathetic landscaping been revealed to a higher degree than at PCR. The idea of the native arboretum and the Dutch herb garden was incidental, but both have been highly approved, and are, of course, quite authentic.

The question of interior decoration in the broad sense raised still more problems. A sound basic approach had to be developed for there had been both active and quiescent periods in the life of the property when certain influences had been favored and others disliked. Since the family had always remained Dutch in stock and preferences, the Dutch feeling, both Netherlandish and American, had to dominate. In the earlier rooms, English items had a natural place, but, in the addition of 1785, apathy toward things British, due to the occupants' experiences during the Revolution, plus a flair for things French, resulted in the elimination of English influences, and an introduction of a touch of the French. The latter was "documented" by a French family clock.

The amazing lack of knowledge concerning pre-Revolutionary living was troublesome indeed. Writers obviously confused pre- with post- Revolutionary life, to say nothing of Netherlandish and American Dutch influences. To add to the difficulties, one must remember that different countries and localities modify a design, at least slightly. A Queen Anne side chair from England, for example, differs appreciably from versions from New England, Pennsylvania, New Jersey, and the lower Hudson valley. If this seems like much-ado-about-nothing, it is important nevertheless because the expert visitor tends to discount the whole project if he encounters inconsistent items in the furnishings. Fabrics, pottery, silver, and a host of other crafts add to the difficulties and require the services of their respective corps of experts. Anyone familiar with antiquarian fields recalls all too well the honest, but deceived, "opiner." A restoration has to be cold-bloodedly realistic.

The truly great interior decorator possesses the subtle art of really telling the story you want, using the pieces you know are right. Colors can be technically right, but still unnecessarily wrong. A room can seem like a shop or like a place to live. For want of a better term, the writer calls this process the "blending" of a room. Many times a

room has to be arranged again and again, with different pieces, before the feeling of truth and livability enters into it. Hostesses and guests form splendid juries for the results; their verdicts are good even when they are not documentable. At PCR, since items are scarce, although not often highly expensive, it has been necessary to show rooms in a developmental way. The public, however, if told why, likes this.

Operations

When the project is ready to receive the public, the usual problems of maintenance arise. The care of precious and often irreplaceable objects, even though they are protected by fine arts insurance, becomes a business in itself, and requires a whole new corps of experts and technicians. The paintings and furniture at PCR are notable. Some are the most outstanding examples of their type in the world. Documents, too, although not popular with the public, require very special care.

The hostesses, who care for guests during their visit to the Restoration, can do much to make or break the project, for no matter how accurate and comprehensive it is made, a Restoration must be sold to the visitor. A typical farewell comment shows the importance of this: "I felt, when I first looked at the Restoration from the outside, that here was something unique. I leave with that feeling amplified. I shall recall, too, and tell my friends, that from the moment I entered your gates till I left there was always someone at hand to be nice to me and to help me get the most out of my visit." Conversely, it is interesting to note that out of three thousand visitors only three have had their admissions refunded with a request to leave.

At present, hosts and hostesses are members of the Historical Society and persons of local prominence. Serving as volunteers, they are trained under a script and cadet system, and are carefully and diplomatically supervised by hosts and hostesses of even wider experience. They are kept informed of all changes caused by the fluid set-up of the rooms, and this adds interest and zest to their enjoyable task of meeting the type of guest that now visits PCR. Preparations are now under way for handling the greatly increased numbers of visitors expected during the coming summer, and these plans, it should be stressed, are again based on research into actual experience in handling guests on location.

The Immediate Future

During the present national emergency, it is impossible to do more than plan from day to day. Contracts have been let for the water wheel and certain machinery for the Old Mill, but fulfillment will probably be delayed until after the war. The masterplan calls for restoration of almost the entire original millpond, for parking areas and a new entry, for completion of landscaping, and for certain additional buildings which have been located by maps and archeological digging.

Completion of furnishing will involve a continuation of present searching plus the obviously desirable cooperation of persons of Dutch ancestry who are coming to recognize the Restoration as a comprehensive family memorial of this sturdy stock.

Community planning is already entering the picture. The Restoration's policy of avoiding concessions opens to local investors new

sources of income derived from the increasing influx of tourists. It follows that shops, restaurants, pensions, and even hotels may spring up around this new center. And PCR, due to its peculiar location, strangely enough actually serves to protect adjoining high class residential zones from the deleterious effects of unwelcome traffic.

Furthermore, the park plans of the community, if not all community plans, must recognize the functions and plans of PCR. Since the community has taken PCR definitely to its heart, such recognition exists already and to constructive ends. The tendency is to work hand in hand with the Restoration for the good of the whole community. The only criticism thus far has been that the project seemed to move very slowly. The revelations at the opening on July fourth soon proved the comprehensiveness of PCR and why, therefore, haste had had to be made slowly. Patrons who furnished the funds agreed that this was wise.

In brief, this project seems to be what the Tarrytowns have needed for a real awakening and for an understanding of themselves, their potentialities, and their heritage. A considerable number of healthful signs of revival of local pride and planning have already appeared, and more are on the way. Cooperation seems to be the new keynote. It is not too much to claim that not only has a new and important source of income and favorable publicity been derived from PCR and that it will continue to grow, but also that the seeds have been sown for community cooperation and planning of the highest type. This community was once a Newport to the New York area. It is conceivable that, stimulated by the Restoration, the Tarrytowns will achieve tomorrow new and greener laurels as a just reward for conserving an illustrious heritage.

* * * * *

DEATH OF SIR EDWIN LUTYENS

(based on an Associated Press dispatch in the New York Herald Tribune)

Sir Edwin Landseer Lutyens, famous British architect, and since 1938 president of the Royal Academy, died at his London home on January 1, 1944, after a long illness. Born in London, on March 29, 1869, he received a brief training in the South Kensington Schools, and in the offices of various architects. Obtaining his first commission in 1888, his practice included many country homes, some, like Lindisfarne Castle on Holy Island (1903-12), involving restoration and extension of old buildings, but the majority new work that displayed a progressively personal though reticent interpretation of traditional English styles. His insistence on a close integration of house and garden gave his mansions an inimitable and lovable charm.

Sir Edwin's civic work ranged from low-cost cottages at Hempstead Garden suburb to the viceregal capital of India at New Delhi. At New Delhi, he laid out, beginning in 1912, the monumental grand plan of the new governmental quarter, and built Government House (the Viceroy's Palace), the Staff Quarters, the Viceroy's Court, the Great Place, and Kingsway, with several palaces for native potentates. In all of them, he fused classical masses with detail inspired by native sources.

He held many other governmental commissions, including the British School of Art and the British Art Exhibition Building (1911) at Rome, and the British Pavilion at the Paris Exposition of 1900. He gave valuable
(continued on page 48)

THIS TOO, MIGHT BE HISTORY

by William Gray Purcell, A.I.A.

"Why build these cities glorious
If man unbuilds goes?
In vain we build the world,
Unless the builder also grows."

EACH WEEK a teacher, born at old Rostov-on-Don, comes here for a visit. He got his fundamental schooling in the Ukraine, his Ph.D. from one of the foremost foreign universities, and like all the Russians has a great facility with languages.

American citizen for twenty years, he knows our land and people, but Europe and its varied folk is his teaching field. He knows what they did, when and why. We look out over the garden and valley, review the victories of his fatherland and speculate on post-war problems of the World. Our discussions, more often than not, are naturally about History and Architecture.

He is a scholar who has been long trained to think accurately and his mind is keen. His useful material is a web of facts as wide as the Lands and as long as the Years. But notwithstanding all this specialized experience and research, his daily urge is to prepare his students toward realization of a happy and satisfying life.

My humanitarian friend sees his important colleagues clever with the puzzles of old academic shards, nostalgic about the glow of some theoretical past. Here and there an obscure Mr. Chips seeks to build scholarship with knowledge concerning the men of his day, but high faculty names must stand circumspect, and the Past asks no uncomfortable ques-

tions. Under such mastership, the potent ancient records spawn impotent theses not applicable to our work or lives. College boys and girls, in a fog of half legible lecture notes, wangle credits and whirl away on thought-free enterprises.

THE HORIZON IS AHEAD

YOUTH WANTS to push on. For them, search, and not research, makes the road. Education "can't tell them," it can draw them out, but only if it is "going somewhere." It should draw them on. History is meaningless unless past events are seen again purposefully. The pragmatism of Old China's culture related to the good earth, not the sterile prefabrications of New Europe's city pavements, will implement the coming soldier-made epoch, now dimly foreseen. Not more tools, but more skills; fewer buttons and switches and "more fences to paint."

THE EVIDENCE OF LIFE IS MOVEMENT

IT HAS been for me a matter of many satisfactions--but I trust no self-satisfactions--that in 1893, a time when few citizens, and practically no American architects, could see any sense in the work of Sullivan and Wright, the power and poetry of their work appeared plain and delightfully engaging to my spirit. On that impulse I resolved to be an architect. The golden Transportation Building, filled as it was with wonderful trains and engines, vehicles of

all the ages, steam automotive tractors and every sort of ship, was fascinating enough to a boy of twelve, but when one dull March day in 1896 I walked into my Aunt's sitting room and saw on the mantelpiece the now familiar *pensketch of Wright's first Oak Park studio which was to be built that summer on a corner of the block in which I lived, a vitalized sunshine energized my human chlorophyll and it has remained green and growing ever since.

COALS FROM PINE KNOTS

IT WAS my good fortune to spend the most impressionable days of my youth in the age-old Ojibwan forest to the south of Lake Superior. There I learned to respect the capable minds of common men, and distrust too much reliance on books. There I saw buildings and tools being made out of a wide variety of naked materials to meet needs on the spot. Effective action crystalized in forms of obvious logic. Birchbark and a boat; white pine and paddle; buckskin on one's feet; the scythe and cradle against grass on the lake shores or a patch of grain in the clearing; wood stoves and wood to split; iron pump handles and splashing poplar pails;--it was a building world that was a long long way from drawing boards. From this early conditioning I later was able to see the draftsman's world as the servant of construction. When I went to Cornell University my concept of the fine art of building gave no trails along which I could follow popular architectural idolatry toward the all-prevailing French ateliers.

* See this drawing, Plate 38 "In the Nature of Materials--The Buildings of Frank Lloyd Wright, 1887-1941." Henry Russell Hitchcock. Duell, Sloan and Pearce. 1942.

JOURNEYMAN DRAFTSMEN

THE MEN who made the working drawings for America, following what Mr. Beard calls that Second American Revolution which came to a truce in 1865, were also beuillers little touched by Beaux Arts catechisms. They somewhat resembled the journeyman printers who, with the possible exception of the barbers, alone continue a tradition which formerly supplied pioneer America with carpenters, tinkers (who were also plumbers), cobblers, wheelwrights, clock makers, locksmiths, gun smiths, and the blacksmiths who shod the horses and repaired the farm tools.

The journeyman draftsmen were a jolly crowd, more often than not hard drinkers, drifting from one office to the next in a restless quest for romance and adventure, carrying with them the gossip of the building world and a homely philosophy of life which reached their architectural work only indirectly. Traditional draftsmen they were, but the tradition was a working influence and habit within themselves. It was a true tradition of their own "school" with scant intellectual bent and no especial scholarly interest in research.

In 1902 I worked beside several of these men in the office of E. E. Roberts (1865-1943), Roy Hotchkiss (1870-1935), and Guy Henderson (1865 and still living in Oak Park in 1940). There were others with Henry Ives Cobb when I was in the construction office of the Chicago Post Office Building, 1903, but only one or two in the large office of John Galen Howard, Berkeley, California, 1904-05. Most of the latter's staff of two dozen men were the conventional products of the Beaux Arts system by then in full flower in all American Colleges.

THE TYPICAL journeyman draftsman would occasionally thumb over books on architecture or look at the pictures in the American Architect, but when at work he used his stock-in-trade patterns. Being entirely sure of themselves, these professional draftsmen went banging along with planning detail and general organization, usually very well thought out in relation to the conventional demands of clients.

"Up to date" on what was "the thing" in materials and conveniences, they were adept, facile, and practical, but unimaginative planners, convinced that their idea would "build," stay built. The bad construction of the period was due as in our day more to the economic pressure of speculators who wanted more than their money would buy, rather than to lack of technical knowledge.

Usually a project would be a natural development of some similar building, preferably one they had themselves done. If the project was out of their line, then the nearest thing to it in some building they knew was used as the point of departure. The last resort was a plan or design in a book or magazine. They had a natural contempt for any one who copied, wanted the pride of designing the thing themselves and would have looked down on the designer who reproduced "authentic" forms from measured drawings or photographed details.

If you will turn to the pictures and plans of American buildings published in the Architectural Magazines of the 1870's and 1880's, you will see an appearance character common to all. Of course that is true today and in its broader outlines it is the voice of the people speaking in their building, but through this atmosphere of the time you can easily follow the patterns of this craft of the journeyman draftsman.

IT IS interesting to study the reaction of a mind like Roy Hotchkiss to the work of Sullivan and Wright. Hotchkiss who was employed by E. E. Roberts, a good business man, was really the architect in that office. He was characteristic of this race of self-educated draftsman designers. Although Wright's work was far from popular in Oak Park where Roberts and Hotchkiss had their office, as early as 1902 when I worked under him Hotchkiss was taking over Wright's forms and patterns as rapidly as he could digest them; at first with his long span porches twenty-five or thirty feet between posts and no intermediate supports, then with wider and wider cornices, flatter roofs, broader doors and windows with less height, long groups of windows all alike, and so on.

Hotchkiss, like many another, was by no means copying. He saw something of the force of what Wright was trying to do and he was continually reorganizing his work progressively from plan up. While limited in imagination, he was clever and ingenious. He succeeded in producing not only acceptable buildings considerably in advance of the average work of the times, but had an experience that got these buildings built in a very direct practical way at low cost. Oak Park and vicinity is filled with his buildings some of which are occasionally mistaken by the casual observer to be from the hand of the Master himself. Thus a school, office building or dwelling would occasionally come close to being creditable performance. The handicap was due in part to the character of Roberts' clients. In general they were the type of people who could be led but a very short distance from the conventional approach to living, and no distance at all toward any really creative departures.

By 1898 Sullivan was well known and Wright and his buildings had become a leading topic for heated ar-

gument in our now architecturally historic town of Oak Park. The local draftsmen were all flavoring their work with snappy details from Sullivan and Wright and the first generation of draftsmen educated in Wright's offices, Charles E. White, William Drummond, Walter Burley Griffen, Marion Mahoney and John S. Vanbergen were beginning practice for themselves. But that is well into another chapter.

JOURNEYMAN DE LUXE

ONE OF these early modernage draftsmen who lifted his professional field to the dizzy heights where frenzied finance swooped and whirled was F. W. Fitzpatrick.

He will be remembered by very few architects. Indeed, at the time he flourished forty years ago he was publicly unknown to the Profession of Architecture, in spite of the fact that he claimed to be "The winner of more competitions for public buildings than any other architect," a claim that was possibly true. The significant point is that although he was responsible for the plan and appearance of a large number of public buildings, his name seldom appeared either in the architectural press, or signed as architect upon the prize winning drawings.

In public architectural competitions he made a practice of offering his services to practicing architects for the design, let us say, of a court house or library. This offer on very elegant banker's stationery included a book of his prize winning designs and a list of his previous successes for architect-clients. When he had won the commission--apparently he usually did--his services were ordinarily terminated at that point, and he departed to some new enterprise. Occasionally he was retained as chief draftsman for the project.

The well known architects of that day, who were so eager to secure his profit-garnering services, nevertheless looked at him over their

shirt fronts with professional condescension. But Fitzpatrick, who looked like Sir Walter Raleigh, was a good natured philosopher and remained untroubled by the anomalous position he was supposed to occupy in the profession. He was no doubt fortified by the thought that it was his succession of client associates who were in real need of face saving.

SALESMAN ASCENDANT

IT WAS perhaps as late as 1920 that I last received one of his elaborate brochures setting forth a list of buildings and of prominent firms with which he had been associated, soliciting collaboration and giving much evidence in assurance of successful results.

Now discounting the socio-professional implications of Mr. Fitzpatrick's position as an architect, he must have been a first class designer according to the standards of the day, for the juries in many of these competitions were the elite Sons of the Beaux Arts, hand picked by that old Pennsylvania pirate, who for many years was the undisputed Czar of Institute Authorized Competitions in this country.

In 1900, Fitzpatrick had won the Chicago Post Office competition for Henry Ives Cobb, at that time really a coryphaeus in the architectural world. By June, 1903, the completed steel work of the building filled an entire city block, with a central tower some twenty stories high. A couple of small two storied, clapboard, shingle roofed dwelling houses had been built within one of the uncompleted mailing rooms to serve as executive headquarters of the building operations. Their second floors were given over to the necessary drafting departments. In these sweltering cubicles, with towel in hand to temper the flow of his hay-fever, Mr. Fitzpatrick was directing the completion of the working drawings and decorative details of the building, dispensing, the while, a flow of

architectural philosophy, of unusually sound sense, and a jovial raillery at the foibles of the self important architects with whom he had worked. I found him a most entertaining, versatile, and capable architectural fashion expert, as practical in plastering on the French Renaissance sugar as any of the Prix de Rome boys from Paris, and with a profound respect for Louis Sullivan.

FORGOTTEN MASTER

BUT WITHOUT question the most distinguished and capable of these journeyman draftsman-architects was Harvey Ellis. His name was known to everyone who read an architectural magazine from 1880 to well past 1900, for his remarkably fine pen drawings. He carried on the pen and ink tradition of the English masters of the nineteenth century, but with a method which enabled him to express with sensitive feeling the difference in essential qualities between a wide variety of building materials. No American graphic artist had a more perfect technical language in architectural rendering.

He worked for some years in Buffalo and St. Louis, but is best known--where known at all--as a designer for Inventor-Architect Buffington of Minneapolis who in 1887 first conceived the construction principle for tall buildings in which the enclosing walls are carried by a fabricated structure, usually of steel.

In men like Fitzpatrick and Ellis, the line between architect and draftsman disappears except for the fact that practically all of their work is credited to employing architects who were often men of little or no creative ability. Although a very large number of buildings conceived by Ellis were built and his designs copied all over the country, he will be remembered as a graphic master by those that remember him at all, because his "employers" were unwilling to give

credit to the mind that was making their reputations through buildings from his designs. Ellis' concepts were not graphic art. He was a true Art of Building man, and the projects which he so vividly portrayed were organized to build and to serve effectively.

Ellis' drawing of Buffington's first 30-story skyscraper in 1887 on which Buffington rested his basic patents, shows a building which anticipated Sullivan's Wainwright Building in St. Louis, in being a unit from sidewalk to roof and with no forced values in the general design treatment to make it appear as if of solid masonry. The rough face ashlar walls are but color and texture in the only material then practical for exterior curtain walls; it was that or face brick.

Ellis deserves a monograph recording his distinguished career. Many of his drawings were reproduced in the Western Architect from March, 1912, to September, 1913.

NIGHTSPOTS BY GAS LIGHT

IN REVIEWING the work of these designers of 1870 to 1900 and the kind of America they were called upon to express, I would like to recall here certain qualities of architecture and decoration which made up the atmosphere of the famous Chicago restaurants of those days. Kinsleys in dark wood, perhaps cherry which was then plentiful and deservedly popular, and the Palmer House restaurant in white with colorful hangings and equipment, both carried an atmosphere of spaciousness and aristocracy which our contemporary work seems to miss. The reason for this may lie in the fact that in an unself-conscious way these old 1880 restaurants were closer to the really dignified quality of the entire social atmosphere rather than, as now, expressing a small and noisy portion of society.

Design, drawing board, sophistication, and self-conscious but



WHEN SELECTING an employe for special duties, a business associate of mine, when all the applicant's qualifications had been recounted, was accustomed to conclude his canvas with, "... well, is he mentally light on his feet?" This appears to be Harvey Ellis' outstanding characteristic. His structural and technological sense is secure—and it is from that point on that his genius as a practitioner in the true Fine Art of building begins to sing.

IN 1891 just what was startling about this building and why were the designs of Harvey Ellis discussed over every drawing board?

To answer this question we face the difficult emotional and intellectual task of dissolving those conditioned tensions of ours, which have been induced by science and the machine within the magnetic field of America's social dynamo since 1893.

Today we are either thrilled or enraged by the new patterns of manners and customs, new design mechanisms in art, science, and industry, but in 1891 it was the *new ideas* seen through *old forms* which blew the whiskers and withdrew the flounces of important and frightened ladies and gentlemen.

Today we seem unable to recognize the self-promoting ideas behind the fashionable gadgeting of current popular procedures, while in 1891 those who were privileged and successful looked right through all the old familiar architecture and saw with horror, a crowd of revolutionary insistences which appeared certain to ruin the comfort of upper middle class prosperity, and for which there were then no known answers except rage and a flow of words.

In sincere 1891 they *wanted* to think but it hurt. Today we are obliged to think whether we want to or not, and that hurts too. In both eras it was the pocketbook that cried the loudest.

MODERN IN 1891

What was the architecture of Harvey Ellis telling a world of habit?

(1) That *volume of business plus service equals profits*. That is to say, the 8 to 12 steps up from the sidewalk to do one's banking, which was universal at that time had to go, because the extra return on high base-

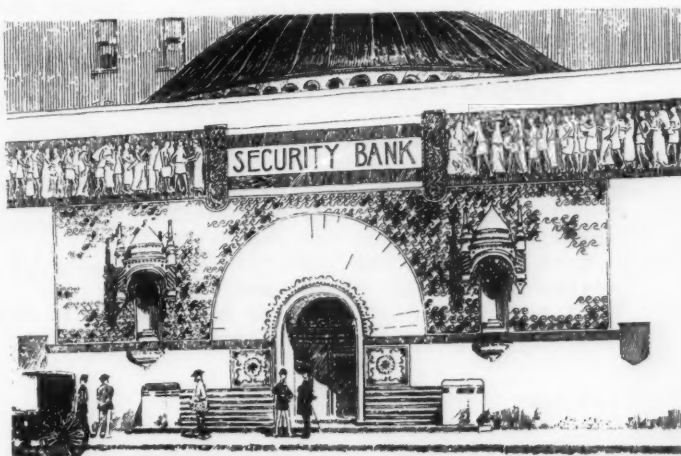
ment rentals would not cover the loss of customer volume due to inconvenience. Then as now it took an architect to analyze business values. There was no profession of Sales and Advertising in 1891.

(2) Again, that city noise, far greater then than it is now (iron tires on granite cobbles) was a destroyer and must be shut out of working offices by doing away with windows. The new power fans for moving air, first extensively used by Adler and Sullivan in the Chicago Auditorium, could now supply all the clean air needed.

(3) That city daylight, far more gloomy from coal smoke than now, need no longer be depended upon, since the new incandescent lights, first freely used in Chicago by Sullivan's engineer partner in the new McVickers Theater, could now provide ample and dependable working light in place of the feeble gas lights of the 80's. And so windows, which at best only lighted a few yards of floor near the street walls, should be eliminated by "modern" designers; but it was to be fifty years before they actually went.

A long analysis would be required to show the creative practical invention of this creative architect Harvey Ellis, but you may note;—a fully developed color system for the exterior; the use of glazed ceramic tile and the then newly developed terra cotta; the bank's clock, to this day a salesmen's gadget stuck on banks everywhere, here integral with the design and complete with special hands and a glass mosaic dial: the decorative terminals for the long sill line later used by both Sullivan and Wright all through the years. The bank project as a whole reflects the dignity and self-respect of old-time businessmen who did not pose as a branch of the government, nor feel the need of reinforcing their prestige with Roman Pomp and a show of extravagant expense.

ONLY FIVE YEARS prior to the Chicago Exposition's "White City" of 1893 which completed the destruction of American joy in color this 1888 bank design of Harvey Ellis glows like Sullivan's golden Transportation Building. Here the fan arch of violet raindrop sandstone breaks up into the colorful rug of ceramic tile, inset with ruddy terra cotta hoods over the niches. Narrow bands of enameled tile form a wainscot either side the entrance, with a half vault of dull gold tesserae over the entry. Clock hands and figures and the sign would be bright gold against a jewel like dial; the historic frieze also in mosaic would perhaps be marble, its very rich coloring keyed to tie in with the Lake Superior brown sandstone of the general construction.



not socially digested current theories concerning the aesthetics of pattern, form, line, or color did not stand between the people who used the room and what had been done with the appearance of things by the builders.

ART IN ACTION

A DRAWING or even the best of photographs of Kinsley's or the Palmer House would not convey to us today the living qualities of these dining rooms. The current pictures held up to us of "the gay nineties or the brown seventies" by drama and novel is not accurate. "To have great poets you must have great audiences," says Whitman. Today's emotional and intellectual complexes are no good audience for 1880 or even 1900.

Given a genuine eagerness to understand, it is still hard to reconstruct the life of those eras. Even the sounds were different. Table talk was an art of conversation, not a broadcast. The click of the dishes and the echo of the soft leather footfalls on the marble floors seem to have a sort of faraway echo against the paneled ceilings of those great rooms. The tables were larger, the spaces between them greater. There was no "service" by the colored waiters who neither thrust themselves into the action nor were they used by publicity-conscious diners to boost their personalities. The negro waiter had a long tradition of knowing what was required and quietly doing only what was necessary. The food was not the center of interest. Its quality was taken for granted. The people were the picture, their minds and manners were the action, but unlike our day the whole drama was only naively self-conscious, the general focus was not turned by each on himself, nor by each on the other, but panoramic in an unrealized sort of way.

ACTUALITY ONLY FOUND IN ACTS

THE WHOLE recollection of these scenes makes one realize vividly the

futility of all style-form design. The material form of the 1870 things themselves was an integrated expression in living use. Our writers let us see these scenes better than architects and decorators because writers are untroubled by a necessity to reproduce authentic style and because they repicture as a whole the people and events in action along with the material objects. An essay in colonial buildings with the costumes and servants and coaches and drama of their day, can be interesting and educationally useful, as reconstructed Williamsburg, Virginia, has shown, but it is pageantry, not architecture. In Washington, the isolated and remote Roman Pantheon copy, adverted to the memory of the restless, exploring, very modern mind of Jefferson, who loved men and lived his life working with and for the common people, does not even lend itself to the art of pageantry. Actually it is only the grave marker of a fashionable and impotent designer, the last record of a dying artistic hierarchy, expressing no more contact with the substance and quality of this great nation of ours than eating apples could be fathered by glass flowers. A replica of the Parthenon sweetened up to serve as a memorial to Abraham Lincoln is meaningless and sad without Greek panoplied warriors, tribunals and festivals, against the background of Areopagus. What our American people today actually enjoy in viewing such monumental reproductions is their own joy and satisfaction in being sufficiently alive to learn some new thing. The living experience that might be added to that joy by forms truly significant of their own national heritage, our official architects never even give them a chance to imagine.

It is a common observation that people of our day just miss having any fun, a view which is confirmed by the curt appraisal "Americans are the kind of people that wherever they are they wish they were some place else." Few amusements are more of a bore than the assembly line entertainment of our

dolled-up night club extravaganzas. Young Socrates getting drunk in a Bacchic festival was at any rate neither stupid or commercial.

*Dionysus, God of the vineyards, groves and meadows, joined grape, ivy, and pan pipes in a ritual of wine, women and song which symbolized the rich Dorian heritage of the Greeks. Farmer, forester, and shepherd were honored for their contribution to a life of experience in beauty which our silly bottle connoisseurs and salad mixing gourmets are neither athletic nor intelligent enough to grasp.

RAIN IN THE DESERT

"OLD STUFF that line of criticism..." yes, just as old as the rules of arithmetic, which must be applied to be useful, for what we all know too easily loses its cutting edge.

To deal with reality in an arguing world, one must keep saying to himself, "It is not the old forms in (or on) these buildings that cancel their validity, but the fact that the buildings are dead. They are not in circuit with the blood stream of the community. Only an occasional artificial memorial day shot stirs some public attention to those cold and sapless halls."

*As an introduction to the creative life in the new world era which this war's end could make available to all, may I urge you to read "Plato and Platonism," and "Greek Studies" by Walter Pater (in most libraries) and the now hard to get, but worth going for, "The Glory That Was Greece" by H. C. Stobart. All are delightful contemporary recreation and you will never again use the word "Classic" about anything Greek nor be casual about the contrast between the out-of-doors Greek and the penthouse Roman.

The builders of Pisa Cathedral were not satisfied at merely copying Roman architecture. They sailed down to Rome in their boats and actually carried off a miscellaneous assortment of old stone columns, cornices, and ornamental carvings. But the building they built with them was not Roman "style" or even reborn Roman, it was a living architecture, new, fresh, and beautiful.

THINGS ARE BUT THE HUSKS OF DEEDS

NO, IT is not old or copied forms which hold us back. Don't be a sophist, however, don't fool yourself with wish logic. If your building is alive, it is in spite of such borrowings, not because of them. Honesty does not rest in the words you use, but in the integrity and potential of the idea conveyed by them. To get the facts and miss the truth is the age-old error of all priestcraft.

New England "modern" is no more functional than New England Early American. Each is stubbornly limited to expressing a few special functions lying in widely separated fields of human interest, while ignoring all the others, together with all the life-giving material which is omitted from both. Thus both factions of the current, and of late rather one sided, art war are cheating us of the good common life which we Americans so desperately need.

Because historians have been preoccupied with the past, which while not dead exactly has at least ceased physical movement, their technique becomes conditioned to the point where the contemporary world must somehow, at least momentarily, be frozen in its tracks or they are wholly at a loss to examine it and report. The result is that historical criticism has been applied not to our contemporary body of living thought and accomplishment, but to a largely unreal hypothesis, the more misleading

because, in the face of an insolvable paradox--static life!--our scholar chooses those special frames from his researching movie shot, which superficially resemble research material in the fields with which he is familiar. By this single track procedure he misses entirely the folk substance, the true genius of the people which is saturating every phase of his own daily life and which will be instantly seen and appraised with amusement and interest by every school child in the next generation.

"IT IS NOT THE KNOWLEDGE
OF A THING BUT THE DOING
OF IT THAT IS DIFFICULT"
-Yueh -B.C.1322
Shu-King Section xii.

Not alone in historical architectural criticism, but in all educational pursuits, professionalism threads its machine with a beautifully taken celluloid ribbon and then projects upon its white screen a single moment of what once was both thought and action. This shot registers but a single point of view through the smallest of apertures. Withdrawn into this dark theater, it mistakes the flicker on the screen for reality. Meantime life goes on without the experts who could be so useful.

It is for this reason that the world-moving contributions in the arts and sciences are not only made by non-professionals, but are bitterly resented by the masters whose sons will use the new knowledge as commonplace. Gallileo, Columbus, Florence Nightingale, Harvey and Pasteur in Medicine, Owre in Oral Surgery, Billy Mitchell, de Gaulle and his "1935 tank thesis," the early discoverers of vitamins, leaders in the social sciences, the creative painters, sculptors, and architects, literally thousands of "amateurs," (in the view of the professional "experts"), have been martyred by self-styled leaders for the useful contributions which have made our world as good as it is.

I am willing to make plenty of mistakes, but I shall never form a part of that stuffy army of face-saving, class-maintaining, self-preserving intellectual aristocrats who have blocked the way to every advance of mankind since the priests of Ammon ruined the social reforms which Ikhnaton had instituted for the benefit of his people, and who also eventually assassinated Tutan-khamen because he continued to declare, as his father had done, that there was only one God.

A NEW DAY'S SUN

THE UNBELIEVABLE simplicity of the world-wide "form and function" philosophy, recognized from age to age for five thousand years, from thinkers recorded in SHU-KING on down to Thoreau, Emerson, and Louis Sullivan in America, is so patent to even an untrained mind that to the working generality of architects today it is incredible how such plain good sense could have been so universally and bitterly rejected by practically all architects during the architecturally fatuous forty years between Sullivan's Transportation Building of 1893 and Saarinen's rejected Chicago Tribune in 1933. The mildest thing said about me as the protagonist of this philosophy at Cornell 1899-1903 was, "Purcell is a queer duck," or when I went back to lecture on the idea in 1911, "That is pretty strong medicine for young minds!"

BUT NOW IT'S DIFFERENT

THUS THE young men of 1943 doubtless felt that "Had we been living in those times we would not have been so unalert. It looks to us that being an architect in 1900 was really too easy. What we have to face these days are more highly integrated building problems, complex with demands by new processes, new materials in great variety, new sciences, new special needs in increasing measure."

We of 1900 agree that what you say is true. We would be perplexed

by your problems. We would be obliged to secure some new and more intensive education--and mere refresher courses would not do it, so we must pass the flashlight to your more versatile hands.

MY LAST CARTRIDGE

HAVING GONE IN for prophesy in 1896, if no more at first than a matter of successfully choosing the Cause and Men who were to win forty years later, let me continue with my prediction continuity, so far successful, and offer to you of 1990 my analysis of what you will be looking back over when you recall that inept "Olde Moderne" way back there in 1945, or find it quite too much that the designers of your youthful days could have been so superficial as to fall for illogical streamlineism, stark plumbing-esqueries, unreal inter-nested facades, ubiquitous corner cults, slant plan patter, embarrassed fireplaces shrinking into awkward angles and all the other applique neo-bozartifices.

Let no controversial reader run off with the idea that I condemn these features. The basic issue is whether they appear as normal growth from the essential idea of the building or are lugged in for application by an aesthetic person thinking in terms of popular professional fashions. The working philosophy here rests on fact, not looks; on the quality of the heart, not the logic of any system. Many of our so-called traditional buildings are much more functional than current self-conscious "modern" which, considered as a whole, is too often constructivist. Mental peace and health are more important than bodily comfort and if we architects must borrow furniture for our facades, there is less vandalism and a more comprehensive view of man in the old romantic designing than there is in the neurotic slicks by which shallow people, well supplied with electric controls, expect to skid around all normal

life experience and so more quickly reach their canned and dehydrated kill-times.

FROM THE PROMISED LAND

A FEW OF YOU will have seen, back there in 1945, that it was the functional relations between human beings, and the bearing of such forces on building, that was the main issue. Not the interconstructional relations of mechanisms; not even the relation of man to his machines; the great need was to solve the spiritual and emotional problem within man and society as a result of the impact of all those ball-bearing material mechanisms. After World War II the whole world had to learn to live with those new tools--and without a lot of them too; nor did America escape this hard lesson. Too much had been done in turning over all healthy fun to machines; the people demanded their turn.

Prefabrication as at first visualized failed, not for lack of ingenuity, but for lack of heart. The returning soldiers of World War II, after an exciting life of action, found their six hour working day unsatisfactory and were desperate for something to do from 3 P.M. to bed time. Television proved a bore; who wanted to watch someone sing or play ball after the action excitement of Bataan and Salerno. "Let's us do it!"

SIGN OFF

UNMET ARCHITECTS of 1990, don't miss the boat, as most did in 1900. Architecture for you will have again become romantic, humane, very warm, personal, and tied to an aesthetic implicit in your times. The "fan" complex will have disappeared. All of you will be playing the game. You will see less waiting for the door to be opened, more fun opening it yourselves. Less hectic going places, more happy doing where you are; less getting, more giving; less having, more living.

That's the coming world I
see! Soldiers and Sailors, Waacs
and Waves of 1945, make sure now
that you won't have to look back

only to find that you did not take
your part in the fun of helping to
build the new world for which you
fought and many of you died.

"Others may praise what they like;
But I, from the banks of the running Missouri,
Praise nothing, in art, or aught else,
Till it has well inhaled the atmosphere of this river,-
Also the western prairie scent, and fully exudes it again."

* * * * *

N E X T S T E P S

Members of ASAH should feel a certain satisfaction in realizing that issue by issue their JOURNAL is winning serious attention for itself and ASAH both here and abroad. There are several measures of this growth. There was, first of all, the gratifying record of membership renewals during 1943, the first such test we have had. Secondly, despite the war, there was a slow but appreciable addition to our roster, due in large measure to the activity of the Washington and New York local chapters, and to a systematic campaign by ASAH officers to bring the Society and the JOURNAL to the attention of the larger university and public libraries of the country. As a result of the latter effort the number of Institutional memberships has almost doubled since last year. Many of the libraries have sought to procure complete files of the JOURNAL, but unfortunately the first two numbers are now collectors' items and our special issue on the History of City Planning has also been entirely exhausted despite an unprecedented printing.

A third indication has been the increasing frequency with which references to the JOURNAL appear in other professional periodicals. Specific articles have been regularly recommended in the ARCHITECTURAL RECORD and the NEW PENCIL POINTS. The Bureau of Urban Research's "Selected Items from The Urban Reference" was recently granted permission to condense an article from our special issue on The History of City Planning. And leading JOURNAL articles have been regularly indexed in the JOURNAL of the Royal Institute of British Architects. One JOURNAL article is being reprinted entire in LANDSCAPE ARCHITECTURE.

Plans for the first number of volume four envision another series of City Planning articles. Capt. Frederic R. Stevenson writes of seventeenth-century planning in Copenhagen. Dr. Carol Aronovici contributes a fine essay on Medieval Cities and the Democratic Process. And Hans Blumenfeld surveys little known city planning projects in eighteenth-century Russia. Members and friends should note that the Editor will be glad to consider informative articles and news items. Typed manuscripts, double-spaced on 8½ by 11 paper, will be given prompt attention and all reasonable care, although no pecuniary responsibility can be assumed. Clearly prepared illustrative material can be accepted on consultation with the Editor.

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A.P.V.A. TRIES TO SAVE OLD RICHMOND

by Mary Wingfield Scott

The Association for the Preservation of Virginia Antiquities, or ".A.P.V.A." as everyone calls it, was founded fifty-five years ago. Since 1893 its chief care and interest has been the twenty-two-and-a-half acres of Jamestown Island where the old church tower, graveyard, and many foundations are located. During the years that followed, the Association acquired by gift or purchase a number of other historic buildings and sites, among them the Mary Washington house and Rising Sun Tavern in Fredericksburg, the octagonal "Powder Horn" in Williamsburg, and, in recent years, the seventeenth-century tobacco warehouse at Urbanna, Smith's Fort Plantation in Surry County, and the architecturally fascinating courthouse at Smithfield. In Richmond it owns the Old Stone House, said to be the oldest building in the city, and has permanent use of the John Marshall house.

The A.P.V.A. has twenty branches, all but two of them in Virginia. One of the most active is in Washington, D.C. The organization functions through a board which meets every month in the charming Marshall house, erected in 1788-91 by Judge Marshall and only sold by his descendants in 1907. Financially A.P.V.A. is supported partly by its modest dues (annual, \$1.00; life, \$10.00), partly by occasional legacies, and largely by admission fees to Jamestown. In 1941 eighty thousand people came to visit this cradle of English civilization and of democratic government in America. Small as the admission fee is, the income from it and from the sale of souvenirs supported the other less prosperous enterprises of the organization until the drastic curtailment of automobile travel reduced the number of visitors so much that admissions now barely pay for the upkeep of the Jamestown property.

Until recent years, all A.P.V.A.'s interest was centered on Colonial buildings, graveyards and records. Hence very little attention was paid to Richmond which only ceased to be a village when the capital was moved from Williamsburg in 1779. A small group of Richmonders in 1935 decided to form a new branch of the A.P.V.A. to be devoted entirely to preserving the old (that is, Pre-Civil War) buildings in our own city. We named the new branch for the city's founder, William Byrd. At that time, a great number of houses were being replaced by parking lots. People able to live in the larger houses

Miss Mary Wingfield Scott is Directress of the William Byrd Branch of the Association for the Preservation of Virginia Antiquities. She has done valiant service in winning popular support for the cause of preservationism in her native state, and especially in Richmond, where her numerous contributions to the city press have succeeded in making a large body of citizens conscious of their architectural treasures. Her "Houses of Old Richmond," published in 1941, illustrated how dramatically cultural history could be associated with excellent scholarship. She is now preparing a volume on cast ironwork of the eastern and southern states.

preferred moving westward, abandoning family homes that were noisy, dusty, expensive both to keep up and to pay taxes on, taxes that classed them as business property. No effort was made to find uses for these buildings which were no longer practical as dwellings. Consequently, the Richmond of 1935 was very different looking from that of 1925. Among many buildings to disappear were the Cunningham-Archer house (1816), said to have been designed by Robert Mills, and the McRae house (1805-9), a curious aggregation of octagons which had been attributed to Jefferson.

What precipitated the formation of the William Byrd Branch was the threat to one of the few remaining eighteenth-century buildings, the one-time home of Adam Craig, whose daughter, Jane Craig Standard, inspired Poe's lyric "To Helen." A simple frame house of medium size, it stood kitty-cornered to the street, and had formerly been surrounded by a tangled garden occupying a quarter of a city block. Of the garden, a solitary magnolia tree remained, a large brick building having been erected close to the Craig house by the Methodists, who used it as a sort of Salvation Army shelter for drunks and other down-and-outs. The neighborhood was a poor one, the many charming early nineteenth century houses being occupied by a low class of Negroes or by Polish and Russian Jews. The Craig house itself, stuffed with broken furniture, was open to the breezes, as devoid of locks as it was of paint. When we first started to clean it, a hoe, not a broom, had to be used.

In 1935 the new Branch consisted of only about twenty-five members. Thanks to the generosity of their friends and to the literary associations of the house, we raised enough to pay five hundred dollars for that part of the property on which the house stood and to make a few elementary repairs. Lady Astor (a one-time Richmonder) sent fifty dollars, Dr. Robertson of San Francisco, a Poe enthusiast, sent a hundred. Most of the contributions were for five or ten dollars. The house was innocent of electricity or plumbing. When our first tenant moved in, we had installed both of these in rudimentary form, and had painted one room and a bath; but the whole building was still so primitive that we quite failed to notice that the bathroom, opening into a hall, had no door on it! With W.P.A. labor, we painted the house outside and in, beginning work on the strength of two contributions of five dollars.

In the spring of 1936, we were given enough to buy the corner lot where the garden had been, getting the eighteen thousand dollar Methodist Institute for seventeen hundred and fifty! For over a year we rented it, putting every cent on the Craig house repairs. When we could afford to tear the Institute down, we devoted the nine hundred dollars from the materials to replacing the retaining wall and paling fence around the property. Our garden was begun, even if it still was a large clay hole in the ground. A gift of five hundred dollars enabled us to begin restoring the brick outside kitchen, then a windowless, roofless shell. Today, after nine years, house, kitchen, and garden are practically complete, though smoke from the nearby railroad and factories makes repainting a constant expense. Fortunately, two women who had lived in the house as children remembered the garden vividly enough for us to restore it much as it had been, at least, in 1895. All the roses, border plants and box have been brought by hand from such old Virginia gardens as Kenmore, Shirley, the Mary Washington house, Montebello, meadowfarm, and Woodberry Forest. Only an oak, a sycamore, and four big crepe-myrtles have been purchased.

When the Craig house was bought, our absurd little branch had beautiful visions of buying and preserving dozens of old houses. Although we now have five hundred members, this plan has never worked out. An even more serious difficulty than that of raising money was to find a suitable use for such houses. It was not practical to make museums in a city already glutted with them. Even a house as beautiful and historic as the Marshall house has never supported itself by admission fees. As all those we could hope to afford were in down-end-out neighborhoods, it would be hard to find tenants willing to live in them if they were able to pay sufficient rent to keep them up. While saving our pennies to buy another house, we have therefore largely focussed our attention on bringing to bear a maximum of publicity on the antiquities of Richmond, both among its citizens and among tourists.

The tendency of the thousands who used to visit Virginia every year before touring became impossible, was to dash through or even by-pass Richmond in order to see Williamsburg. Richmond deserved this, for no effort was made by the Chambers of Commerce, the hotels, or any other organization to tell visitors how many more genuinely old buildings there were to be seen here, or how many events in Virginia and American history were associated with the city. There were no convenient books on Richmond, and the post cards were the usual Hawaiian-sunset-behind-the-biggest-hotel which most American cities offer to lure visitors.

Houses of Old Richmond, by the director of the Branch, which appeared in December, 1941, under the auspices of the Valentine Museum, has done something to correct this ignorance among both citizens and tourists. A less expensive book covering public buildings as well as dwellings is needed. After trying in vain to interest various local firms in publishing some attractive post cards, the William Byrd Branch decided to invest some of its savings in a series on historic buildings. In May, 1942, we began with twenty-three views. We now have thirty-seven, taken from the best photographs obtainable. This represents nearly seventy-five thousand cards. Of the five hundred dollars invested in this enterprise, we have got back two hundred and seventy-five, though we do not plan to make money by this, but simply to put historic Richmond on the map. We sell the cards at very little above cost to museums, historic houses and churches, which retail them to the public. Thus organizations which are also trying to preserve old buildings can almost double their initial outlay, while visitor, to Richmond and their correspondents get an idea of how much there is to see here of architectural or historic interest.

One of our chief sources of publicity is the exhibits which we have put on from time to time at the Valentine Museum. This museum, housed in the lovely Wickham-Valentine mansion and in three houses adjoining it, has, during the ten years' directorship of Miss Helen McCormack and now under Mrs. Robert Claiborne, veered more and more toward becoming a sort of Richmond Musee Carnavalet, gathering in objects and documents connected with the city's past. Among exhibits in recent years, were those on Richmond Iron Work and on Old Neighborhoods of Richmond. The Iron Work Exhibit first called people's attention to the enormous amount of cast iron in the city, which makes it a not unworthy rival of Mobile, Baltimore, or even New Orleans. As a result of this publicity, a large number of verandahs and fences have been repainted, and few have been torn off and sold for scrap,

which was being ruthlessly done prior to the Iron Work exhibit. One might almost say that awakening Richmonders to the beauty of ornamental iron is the most tangible achievement of the William Byrd Branch. Unfortunately, little has been done to repair the wealth of fences in Hollywood and Shockoe cemeteries. So many families have moved away or died out that our gesture of having one particularly charming fence around an abandoned section repaired has had little effect. Copies of about half the photographs used in the Iron Work exhibit may be seen in the Metropolitan Museum, which asked to have them made.

The exhibit last winter of Old Richmond Neighborhoods grew from a study which the director of the William Byrd Branch is at present making for the Valentine Museum. This is a file of all the Pre-Civil War buildings still standing in the city. On each card is a history of the building, a brief description, a statement of its condition, owner and present use, and of the alterations needed to bring it back to its original appearance. On the reverse of each card is a photograph of the building. Thus far, about four hundred and ninety cards have been done. This includes a good many more actual buildings than that, as double houses, pairs, and even rows are included on one card. The file will eventually contain at least seven hundred items, probably more. It is a subject of amazement to Richmonders who have seen house after house demolished to realize that the city still has at least seven hundred dwellings, stores, factories, churches, and public buildings which are at least eighty years old, most of them much older. Such a file, which was suggested by one which Miss McCormack compiled after her return to her native Charleston, should be made of every old city, town, and even village in the United States if we are to have a complete picture of the country's architectural development.

While this file is and will be invaluable in furnishing data for exhibits, articles, or books on Richmond, it reaches a very limited public. How to interest the owners of the seven hundred buildings and make them see their possibilities, is a problem that must be approached with untiring vigor. The exhibits have helped; newspaper articles, also. Tours are even more effective publicity. For about five years, the William Byrd Branch has enjoyed an annual "treat" in the form of a visit to some interesting house opened without charge to members only. Last spring, in connection with the Old Neighborhood exhibit, the Valentine Museum initiated a series of walking tours to various old sections of the city. These were continued by the William Byrd Branch, which plans to renew them this spring. They attracted large and enthusiastic crowds and were the object of much curiosity and interest among people in the neighborhoods visited, who were greatly surprised that they lived or worked in buildings people would come to see.

This January, the William Byrd Branch has begun publication, for its members and others interested, of a modest sheet, OLD RICHMOND NEWS, which will appear as often as seems justified, and will carry news, not only of the Branch's activities, but of all efforts at preservation by individuals or organizations. Each number will also have a list of old buildings still to be seen, such as factories, houses built by free Negroes before the War, old churches, etc.

These many attempts at publicity have been only partially successful in changing the point of view of a large commercially minded city. Since the Branch was founded, several interesting houses have been torn down. These include the Westmoreland Club, a handsome Greek Revival

mansion of 1839, where Thackeray and other notables were entertained, and the Bott house (1802) in the former Manchester on the south side of James River. The Branch made every effort to induce the City Council to acquire the Bott house as a branch library and recreation park, but to no avail. Only piles of bricks mark the site of the spreading trees and the monumental double chimneys which flanked both ends of the house.

On the other side of the balance sheet, a number of houses have been saved and put to use. The Barret house (1844), finest of the Greek Revival mansions, belongs to two of our members. It is now used by the Navy League, so that every week scores of boys find a homelike atmosphere in its beautiful interior. The Bransford house, of the same type, has been restored as a church-house by the Second Presbyterian Church next door. The Ritter house, an "Italian Villa" of the 'fifties, has been bought and utilized by the thriving Richmond Division of William and Mary College. An attractive dwelling of 1813 occupied by the Negro Y.M.C.A. has recently been repaired. The charming home of Claudius Crozet, great engineer and founder of the Virginia Military Institute, has been elaborately restored and is used as a dwelling and antique shop. Perhaps most interesting is the Caskie house, built 1808-9, with curious octagonal bays and beautiful interior plaster work. This has been acquired as headquarters for the Richmond Branch of the American Red Cross. The former owner cooperated in a public-spirited manner unusual in Richmond by selling it for far less than he had been offered for the site. The Medical College of Virginia, after sacrificing a number of interesting houses in its tremendous expansion, is making tardy amends by restoring the Beers house (1839), a fine neo-Greek type, and by utilizing the abandoned First Baptist Church, designed by Thomas U. Walter, architect of Girard College, Philadelphia. The most recent restoration is the Masonic Hall (1787), one of the oldest buildings in the city. This is directly due to a tour last spring, in which this rarely opened building was shown to visitors, some of whom made bold to criticize its condition.

Our chief problem at present is less one of demolition than of unwise repair. With construction impossible and no demand for parking lots, many houses, even some condemned by the Building Inspector, are being repaired where a few years ago they would have been summarily torn down. Even when an architect is employed, knowledge of what is appropriate to our old houses is limited, and in most cases repairs are left to the tender mercies of a contractor. In consequence a house often loses its distinctive charm. For example, the owner of one beautifully kept up house has recently ruined it by substituting an elegant Georgian doorway for the small porch with square pillars typical of the 1840's. A similar doorway on a somewhat later house has replaced one of the most curious pieces of jigsaw Gothic scrollwork which we have ever seen. There is an epidemic of white asbestos siding-shingles which is effectually disguising many small houses of the 'forties or 'fifties. Since one has no warning that a house-owner is going to perpetrate one of these "improvements," there is no way to warn him that an old building cannot be successfully restored into something it was never intended to be, but only into its own best self.

The two largest groups that need education on our old houses are the Negroes and the few large owners of slum real estate. A great proportion of our old houses are now occupied by Negroes, who, how-

ever, own relatively few of them. The tendency of Negro owners is to make elaborate and unsuitable alterations, that of white owners is to charge as much rent as the traffic will bear and resign themselves to letting unreliable and destructive tenants pull the house to pieces. The first group is more accessible to ideas than the second, who are not unnaturally fatalistic. In a small way we have tried, in the process of photographing, to talk to the occupants of old houses and give them some conception of the beauty of line, of detail and of surrounding trees. The problem of preservation is linked with that of better ways of living. Those who scorn an interest in it as a stuffy museum job unrelated to the bitter world we live in need only go on such a photographing expedition to realize the close connection between mankind's dwellings of yesterday and his life today.

No doubt, members of ASAH have had similar experiences to those of the William Byrd Branch of the A.P.V.A. Probably many have done better than we have in nine years of attempted public education. We pass our experiences on chiefly in the hope of profiting by some of yours.

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EXHIBITION AVAILABLE ON
MODERN DUTCH ARCHITECTURE AND CITY PLANNING

The Netherlands, now unscrupulously looted by the German invaders, had many cultural monuments to tell the history of its rich past and to promise the future development of a strong cultural life. They encourage an indomitable belief that the Netherlands shall rise again.

Though small in area, just one-half the size of Maine or West Virginia, Holland has played and continues to play a leading part in world architecture. Before the war, architects, town planners, and building authorities from all regions of the globe came to Holland to study architecture and city planning.

To facilitate and increase knowledge and understanding of these phases of Dutch culture, Dr. Bromberg, of the Netherlands Information Bureau, at the suggestion of Professor C.L.V. Meeks, ASAH secretary, has assembled a dramatic group of mounted display photographs which are available for exhibitions at institutions in the U.S. The subject matter includes a few outstanding examples of historical architecture, but principally noteworthy modern buildings, housing, and city planning projects. In all, there are over 160 items.

Institutions and organizations can obtain this exhibit at the modest cost of transportation one way. Anyone interested in this remarkable opportunity should communicate with Mr. Rombout van Riemsdyk, Exhibition Department, Netherlands Information Bureau, 10 Rockefeller Plaza, New York City

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THE ORIGIN AND THE DISTRIBUTION OF THE BULBOUS DOME

by Wolfgang Born

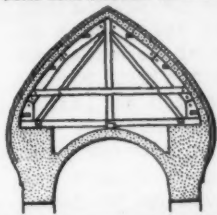
By the term "bulbous dome" we understand a pointed dome which swells, so as to overhand the drum below. Bulbous domes have appeared in various areas at different periods. Their form cannot be explained convincingly by purely technical developments(1). Neither are hemispherical domes transformed into bulbous domes merely by the evolution of styles.

There are no remaining bulbous domes which clarify the problem of the origin of this form. Therefore, every attempt to trace this origin must resort to theories. In the following paper, an attempt will be made to fill the historical gaps through the examination of undercurrents and through conclusions drawn from extant monuments of later origin which have retained traits of earlier stages of the development. A history of art "in strata," rather than an evolutionist way of thinking, holds out a fair chance of a satisfactory result, if the problem in question involves several countries and periods(2). For a logical transformation of styles, like that of the Renaissance into the Baroque, so keenly analyzed by Wölfflin, presupposes an unbroken succession of forms. Such a succession, however, can take place only in a limited area and a limited time, for no culture circle remains stable forever. Political and military events change boundaries; revolutions and economic developments change the social order; mass migrations and persecutions change the ethnical structure of the so-

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- (1) K.A.C. Creswell, "The History and Evolution of the Dome in Persia," (The Indian Antiquary, XLIV, 1915, 146-147); Zierer, "Ursprung barocker Kuppeln" (Konsthist. Sällskapet Publ., Stockholm, 1916, 5sqg.), considers Russia the home of the bulbous dome and tries to show that the Russians protected stone domes by wooden shells constructed like umbrellas, which produced a bulbous form by a technical development. Only a summary of the paper is known to me. Zierer's idea is not convincing. A similar theory of Indian bulbous of "lotus" domes in: A.H. Longhurst, "The Influence of the Umbrella on Indian Architecture" (Journal of Indian Art and Industry, V, 1914, 101, 160, 162).
 - (2) H. Glück, Der römische und abendländische Wölbungsbau (Vienna, 1933), has developed this method on the basis of J. Strzygowski's theories. The author of this paper, who has carried on researches in the same direction ("Das Tiergeflecht in der nordrussischen Buchmalerei", Seminarium Kondakovianum, Prague, V, 1932, VI, 1933, VII, 1935, and in some later papers) has suggested the term "History of Art in Strata" in a lecture: "A Scottish Relief of Samson with the Lion," given at a meeting of the College Art Association in New York, 1939.

Dr. Born, after studying under Josef Strzygowski and Max Dvorak, took his degree in the history of art at Vienna; has written extensively on art criticism and art history, especially the history of craftsmanship and ornament in the Orient. For several years, he has filled with notable success the post of Director of Art at Maryville College, St. Louis.

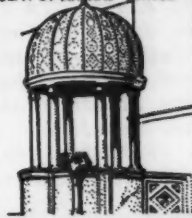
1 - DOME CONSTRUCTION - NEAR EAST



2 - STUPA - CHAITYA HALL - AJANTA



3 - PULPIT - ST. MARK'S - VENICE



4 - CANOPY - HARBAN - HEBRON



5 - FOUNTAIN - MADRASAH OF SULTAN HASAN CAIRO



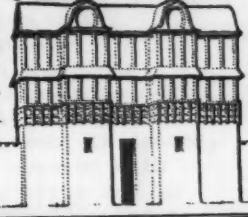
6 - ARTOPHORIUM - AD-LA CHAPELLE



7 - FACADE - CHAITYA HALL - NASIK



8 - RELIEF - STUPA - SANCHI



9 - ROCK-CUT RATHA - MAMALLAPURAM



10 - TOMB - PINARA - LYCIA



11 - NICOLSKY CHURCH - ZACHACHI



12 - STROGANOFF PALACE - SOLVYCEGO DSK



13 - TITLE PAGE - GOSPEL BOOK OF DOBRILA



14 - CZAR'S PLACE - VELIKIY NOVGOROD



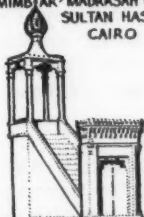
15 - BOAT - CANOPY - MINATURE SCHOOL OF BAGHDAD



16 - ST NICOLAS THE WONDERWORKER - PANILOVA



17 - MINBAR - MADRASAH OF SULTAN HASAN CAIRO



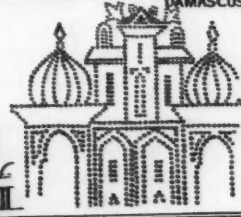
18 - PINNACLE - MINARET MOSQUE AL-AZHAR CAIRO



19 - KUBBAT - AL - SAKHRA - JERUSALEM



20 - MOSAIC - Umayyad MOSQUE - DAMASCUS



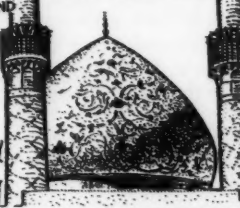
21 - TITLE PAGE - PSALTER OF UGLICH



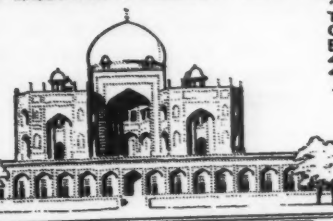
22 - MADRASAH - GURU-MIR SAMARKAND



23 - MASJID - SHAH - ISFAHAN



24 - MAUSOLEUM OF HUMAYUN - DELHI - INDIA





ciety; and personal or intellectual contacts introduce foreign influences into an established civilization. Not all strata of the art of an area which is affected by one or by several of these changes are transformed in the same degree. Folk art and other substrata have preserved ancient forms over an almost unlimited period. Given favorable social or historic conditions, latent undercurrents in art can rise to the surface and stimulate new developments. Sometimes such a development takes a circuitous path. The Renaissance and other revivals in art result from the rise of obscure undercurrents into the manifest level of an advanced art.

Bulbous domes are decorative shells surmounting shallow domes which form the ceilings of the rooms below. In countries which are rich in wood and in which the carpenter's craft was developed early, bulbous domes were constructed of wood and covered with copper or shingles. This was the case in the north and in the mountainous and tropical regions of the south as well. In countries where clay and stone were the predominant building materials and where wood is scarce, bulbous domes were constructed in brick and concrete, covered with tiles. This was the case in subtropic plains, on the steppes and in areas of a similar geographic and climatic character (fig.1). Naturally, various regions have influenced each other. Building materials are not rigidly restricted to the areas of their origin. But exceptions to the rule are of no fundamental importance for the origin of the bulbous dome, and therefore they remain outside the scope of this paper.

Bulbous domes are of a lighter and in most cases different material than the rest of the building which they decorate. Many such domes in various countries exhibit common traits which permit us to treat them as a group of related structures distinct from the edifices they crown.

Bulbous domes appeared in India, Persia, Turkestan, Egypt, Russia, and finally spread to western Europe. They form a stratum of architecture distributed through this enormous area, embracing the near East and adjoining south Asiatic and east European countries. In this article, we will not pursue its western spread. Nor will we proceed in an historic manner. On the contrary, we will try to "excavate" the developmental stratum which produced the bulbous dome. Technical experiences and basic designs are shared and exchanged by craftsmen of different nations. Generations of craftsmen keep these traditions alive, and their unassuming activity inspires the development of new forms in architecture. This is true, especially, of the professions of the carpenter and the mason, two fundamental trades which usually survive unaltered when political and military regimes collapse.

A traditional motif which is preserved in an undercurrent of art can contain elements of an ancient period of advanced art. For the strata of culture are not separated mechanically. It is, therefore, necessary to clarify our problem from the beginning by analysing its contributing elements.

It is our task to recover the rudiments of the bulbous dome wherever we find their traces, to reconstruct its development in the substrata of carpentry or masonry, and to determine as closely as possible the place and the time where and when the bulbous dome rose into the monumental architecture.

Many Buddhist stupas, or *dāgabas*, in India possess the form of pavilions supported by columns, decorated with bulging, but unpointed, cupolas, as seen in the stone stupa in the Chaitya Cave at Ajanta, and in even earlier examples (Fig.2). They served as models for later Mohammedan pavilions with egg-shaped cupolas, which in turn were imitated by the architects of the domed mosques, for Indian craftsmen continued to work in the near East during the early period of its conversion to Islam (3).

Pavilions decorated with bulging, but unpointed, domes or cupolas comparable to the stupas, appeared in interiors of both Christian and Mohammedan buildings. For example, the Romanesque pulpit on the left side of the nave in St. Mark's Basilica, Venice, has a canopy supported by columns and decorated with a bulging, shallow and fluted, but unpointed, cupola (Fig.3)(4). It dates from about the twelfth century.

The Sepulchre of the Patriarchs, the Haram, at Hebron (el-Khalil), Palestine, contains a pavilion of a similar type (Fig.4). In the time of Herod, a Jewish sanctuary was erected on the site, but it was rebuilt by the Crusaders as a church. After the downfall of the Latin kingdom, it was transformed into a mosque. Over the orifice of the cave where the tombs of the Patriarchs were placed, stood a square canopy supported by columns and decorated with a shallow and fluted, but unpointed, cupola. According to an inscription, the canopy was erected in 1331-1332 by the Mameluk Sultan al-Malik al-Nasir Muhammad, but it emulated a similar pavilion dating from the time of the Crusaders (probably twelfth century) which is still preserved in the Haram with the exception of its cupola(5).

- (3) E. B. Havell, *A Handbook of Indian Art* (New York, 1920), 54, pl. 11 A, Stupa-House No. 19, Ajanta, and 106, 108, 111, 145-147. Creswell (loc.cit.146,147) was right in denying that late Islamic bulbous domes were directly modelled after early Buddhist egg-shaped stupas. E.B.Havell, in his *Indian Architecture* (London, 1927), 96-97, and loc.cit.pass., has advocated the idea. M.Abdullah Chaghtai, in his "Indian Links with Central Asia in Architecture" (*Indian Art and Letters*, XI, 88-91) disagrees with Havell. It is true; no direct evolution from the egg-shaped Indian stupa to the Islamic onion-shaped or bulbous dome has taken place. The indirect way in which the egg-shaped stupa has contributed to the formation of the bulbous dome will be treated in a later passage of the present paper. A.K. Coomaraswamy, in "Early Indian Architecture" (*Indian Art and Letters*, New Series, III, 1931, 181-217, Fig. 71) describes the dome of the eleventh century Colēsvara chapel at Māluppālūvār, as a bulbous dome with an inverted lotus crowning, and water-pot finial, and mentions that the same type of construction was used much earlier. This form, however, does not fit into the definition of a bulbous dome, because its sides do not overhang the drum below, and it has no real point. It is, therefore, a variant of the egg-shaped dome.
- (4) A.Venturi, *Storia dell'arte Italiana* (Milan, 1902) II, 363. G.Lorenzetti, *Venice, the piazza and the basilica of St. Mark*, Milan and Rome, (n.d.), 70, compared it with a "romanesque minaret."
- (5) L. H. Vincent, E.J.H. Mackey, F.M. Abel, *Hebron, le Haram el-Khalil* (Paris, 1932) 55, 211, 217, fig. 83, pl. 11.

Finally, there are egg-shaped domes crowning the roofs of many buildings. The Umayyad Mosque in Damascus, built in 705-713, is said to have had originally a wooden egg-shaped double dome, according to a modern interpretation of medieval Arabic literary sources(6). The Dome of the Chain (Kubbat al-Silsilah) in Jerusalem shows an egg-shaped, fluted, wooden dome which supports a pointed finial. It was probably erected in the beginning of the eighth century, but rebuilt by Sultan Baibars I (1260-1277)(7). The egg-shaped brick cupola on the mosque of H. Akim in Cairo was completed in 1003, but underwent restorations at the end of the thirteenth and the beginning of the fourteenth centuries. The Madrasah of Sultan Hasan in Cairo (1356-1363) originally had an egg-shaped dome, according to a description written by the Italian traveller, Pietro della Valle in 1610. In the seventeenth century, it was replaced by a pointed, but not bulging, dome. Della Valle's statement is supported by the egg-shaped cupola of the fountain of ablution in the courtyard of the same madrasah (Fig.5). In the Mausoleum of Sultan Barkuk (1400-1410) in Cairo, there is also a fountain of ablution with an egg-shaped dome (8).

Aside from these remaining egg-shaped domes in architecture, there are goldsmith and bronze works and pictorial representations that have preserved the form of such domes in the near East. In the Cathedral of Aix-la-Chapelle is a Byzantine artophorion, or ciborium, for the reserved Eucharistic Bread, in the form of a square church with a fluted and bulging, but unpointed, dome capped by a similar small cupola, probably a representation of a lantern (Fig.6). An inscription refers to the proconsul Eustathius who was general of the army of Antioch at some time between 915 and 1057 (9). Probably of Syrian origin, it represents a church at Antioch.

In the treasury of St. Mark's, Venice, there is another Byzantine artophorion, dating from the twelfth century, in the form of a central church decorated with five bulging, but unpointed, domes; the central dome supports a lantern with a fluted, bulging cupola (10). In the Arabic Museum at Cairo, a chandelier bearing the name of Sultan Hasan and the date 1347, is formed like a pavilion and has a swollen, shallow cupola which differs from that of the fountain in the courtyard of the Hasan's madrasah only in its fluted surface(11).

(6) Creswell, *loc.cit.*, 145, pl. 3 A,B. G.T.Rivoira, *Moslem Architecture* (London, 1918), 80, attributed to the fifteenth century the pointed, but not swollen, form the dome showed before it was destroyed by fire in 1893.

(7) Rivoira, *loc.cit.*, 56, 57, fig. 37.

(8) Rivoira, *loc.cit.*, 163, fig. 134. Creswell, *loc.cit.*, 150. H. Glück and E. Diez, *Die Kunst des Islam* (Berlin, 1925), 536, fig. p. 174.

(9) G. Schlumberger, "L'inscription du reliquaire byzantine en forme d'église du Trésor d'Aix-la-Chapelle" (*Fondation Eugène Piot, monuments et mémoires*, XII, 1905, 201-205, pl.24); L. Bréhier, *La sculpture et les arts mineurs Byzantins* (Paris, 1936), 88. Romanesque domed reliquaries made by the Cologne master Fredericus in c. 1160, and now in the Victoria and Albert Museum, London, and other museums, imitated the form of the Aix-la-Chapelle artophorion. Cf. W. Burger, *Abendländische Schmelzarbeiten* (Berlin, 1930), 86-90, figs. 48, 49.

(10) Bréhier, *loc.cit.*, p. 88, pl. 58, no.2, compares it with Caucasian churches, but without offering reasons for his statement.

(11) U. Tarkie, *L'architettura e l'arte musulmana in Egitto e nella Palestina*, (Torino, n.d.), pl. 73, 88.

The title page of a twelfth-century Byzantine manuscript of the Homilies of Jacobus Monachus includes an architectural background with a square church decorated with a bulging, but unpointed, dome which is covered with shingles and supported by a drum(12). The building recalls the apothecion of Aix-la-Chapelle. On the title pages of Russian manuscripts of the same period there are conventionalized representations of churches decorated with semicircular or slightly egg-shaped domes which were developed from Syro-Byzantine models(13). In the Madrasah Zahiriyah Intra Muros in Damascus, which was originally a palace, and was rebuilt in 1277 to serve as the mausoleum of Sultan Baibars, there are mosaics which include buildings with towers supporting bulging cupolas of an almost spherical form(14).

Thus far we have examined stone domes, their imitations and illustrations. They have had in common bulging sides, but this comprised only one of the two distinguishing marks of a bulbous dome. The second characteristic is its pointedness. Bulbous domes have a silhouette similar to a pointed horseshoe arch.

India was first to develop curved, wooden saddle roofs. In south India primitive bamboo huts in the form of stilted barrel vaults with sloping sides and crests on their summits have survived in the Nilgiri mountains. The Dravidian tribe of the Toda has developed this form of dwelling which is considered to have preceded the curved wooden saddle roof(15).

- (12) Paris, Bibliothèque Nationale, Gr.1208, f.1; J. Ebersolt, La miniature Byzantine (Paris and Brussels, 1926) 39-40, pl.36, no.1; C.M. Dalton, Byzantine Art and Archeology (Oxford, 1911) 458, 479. W.H.P. Hatch, Greek and Syrian Miniatures in Jerusalem (Cambridge, Massachusetts, 1932) 122, pl.65, illustrates a Last Supper, f.116, v. Cod. 28, Syrian Orthodox Convent of St. Mark, Jerusalem, written in Edessa in 1222. In the background of the miniature is a conventionalized building with a plain, egg-shaped cupola.
- (13) M.A.I. Nekrasov, "Les frontispices architecturaux dans les manuscrits Russes avant l'époque de l'imprimerie (L'art Byzantine chez les Slaves, Paris 1932, II, pl.39, 2, Gospelbook of Theodor, Jaroslavl); W. Born, "Das Tiergeflecht in der nordrussischen Buchmalerei," (Seminarium Kondakovianum, Prague, V, First part, 1932, 63-95, second part, VI, 1933, 91-108, third part, 1935, 62-80).
- (14) J. Sauvaget, Les monuments historiques de Damas (Beyrouth, 1932) 67/68, fig.25; E. de Lorey, "Les mosaïques de la mosquée des Omayyades à Damas" (Syria, XII, 1931)
- (15) W. Simpson, in "Origin and Mutation in Indian and Eastern Architecture" (Transactions of the Royal Institute of British Architects, II, New Series, 1891, 245-353, figs.115, 116), illustrates a Tirî-êri, or Holy Place, distinguished by its crest. E. la Roche, Indische Baukunst (Munich, 1921) I, fig.16 b; G. Jouveau-Dubreuil, Archéologie du Sud de l'Inde (Paris, 1914) 20, fig.6; O. Reuther, Indische Paläste und Wohnhäuser (New York, 1925) 11, 12, cf. fig.12, a cornstack in the form of a ratha in Kanimata, South India. J. Strzygowski, Asiens bildende Kunst (Augsburg, 1930) 365, attributes the pointed horseshoe arch to the immigration of people from the north and thus considers it a nordic (Indo-European) element although it originated in a Dravidian culture; id., Early Christian Art in Northern Europe (New York and London, 1928) 154-160, fig. 65, suggests shipbuilding motifs, i.e. the keel, might have been instrumental in the formation of the early Scandinavian wooden architecture which includes horseshoe arches. G. Combaz,

In the Asoka period Buddhist chaitya halls and other sanctuaries were cut in the rock. The facades of these rock-cut chaityas emulated the facades of wooden buildings which preceded them. The earliest rock-cut grottoes show ridged and curved roofs supported by square rafters carved in pointed horseshoe-shaped soffits, as illustrated by the Lomas-Rishi cave in Bihar near Gāyā, dating from 258 B.C.(16). To cite only an early and a late example, the chaityas of Nasik (Fig.7), and Ajanta (cave no. 26), dating respectively from the middle of the second century B.C. and the seventh century A.D., show large sun windows above the entrance (17). The frames of these sun windows have the form of pointed horseshoe arches. Pointed horseshoe arches were recurring motifs in both the Buddhist and Hindu architecture of India. The cross-sections of saddle-roofs illustrated in reliefs from the Sanchi Stupa (first century A.D.) have this form (Fig.8). Here the vaults have the form of the inner rim of horseshoes, but with a pointed crest on the outside. Their roof surfaces curve out at the bottom, and form makaras, that are conventionalized monsters. In a simplified form, curved wooden saddle-roofs were emulated in the rock-cut rathas (temples) at Mamallapuram in the seventh century A.D. (Fig.9). The rathas can be traced back to Shivaite monasteries(18).

In the province of Lycia in Asia Minor, facades of rock-cut tombs emulated wooden structures, similar to Indian sanctuaries in the use of pointed saddle-roofs supported by rafters, but differing from them in the lack of the horseshoe form (Fig.10). Besides the rock-cut tombs with facades carved in the surface of the rock, there are stone sarcophagi. Some of them are built of stone masonry; some are cut from a rocky mass. Their facades recall chaitya halls; and the sarcophagi resemble the rathas. The Lycian tombs date from the sixth to the second half of the fourth century B.C.(19). The diffusion of wooden buildings with curved and ridged saddle roofs must have penetrated regions in the near East between Asia Minor and India. Pointed horseshoe arches appeared in the stone architecture of Egypt and Syria during the first centuries of Islam. While no existing vaults of this type have been reported, it is not impossible that they were used, especially in wooden constructions(20).

Since prehistoric times, Russia has shared the developments in art and craftsmanship of her Near Eastern neighbors. Through the ages and up to the present, wood has always been a favored building material in Russia. This wooden architecture, belonging to the stratum of peasant art, preserves archaic forms, and is only slightly influenced by the changing styles of urban art. The oldest remaining wooden build-

L'Inde et l'Orient Classique(Paris, 1937) 59,60, suggests an Iranian origin of the pointed barrel vault of India, but admits that there is nothing known about Iranian wooden architecture of this type.

(16) Havell, loc.cit., (Handbook), 24, pl. 2A.

(17) E.Diez, Die Kunst Indiens, Wildpark Potsdam (n.d.) fig. 43.

(18) L. de Beylié, L'architecture Hindoue en extrême-orient (Paris, 1907) 70,71, fig.62, Relief, first century A.D., Sanchi. Diez, loc.cit., 59,60, figs.67,68.

(19) G.Perrot et Ch.Chipiez, History of Art in Phrygia, Lydia, Caria and Lycia (London, 1892) 369-573, figs. 264,267; C. Uhde, Die Konstruktionen und Kunstformen der Architektur (Berlin, 1903) I,13,14.

(20) The Islamic horseshoe arch and its forerunners are discussed in Rivoira, loc.cit., 110-124, where Fig.85 shows pointed horseshoe arches in the Umayyad Mosque at Damascus.

ings in Russia are rural churches of the seventeenth century. From old records, however, we know that wooden churches were built in Russia as early as about 990, and that early churches were preceded by pagan temples also built of wood. Both the wooden churches and pagan temples allegedly were decorated with domes(21). Thus, the wooden churches of Russia can serve as substitutes for missing ancient wooden structures in the near East, by supplying the early stages of the development of the bulbous dome in the stratum of wooden architecture. This does not mean, of course, that the bulbous dome was actually developed first in Russia. We have to think of this development as of a process gradually going on in a much larger stratum of wooden construction.

In Russia the elements of the horseshoe arch and the ridge, which in India were segregated to the vault and the roofing respectively, were combined into a single decorative unit, namely, the *bochka*. The *bochki* have in section pointed horseshoe arch ending in a ridge. They are surviving examples of the type of ancient curved wooden saddle roofs known to us in Asia Minor and India. The wooden churches of Russia are late, hybrid products and include elements of various periods. *Bochki* may be used coexistantly with bulbous cupolas, as illustrated in the seventeenth-century church of Chukherma, near Aronangel(22), and in similar buildings. Sometimes the domes are polygonal, as in the eighteenth-century model of the former wooden palace of the Czars at Kolomenskoye near Moscow, built 1667-1687 and destroyed a century later, which has a square dwelling tower capped by a four-sided, bulbous pavilion roof (23). Trinity Church at Pedborozhie(24) in the former government of Archangel, built 1725-1727, has four-sided bulbous pavilion roofs supported by square structures. The domes are decorated with bulbous cupolas. The Nikolsky Church at Zachachi (former government of Archangel), built in 1687, has an octagonal bulbous pinnacle over octagonal tower, and two wings covered with *bochki*(Fig.11)(25). Polygonal bulbs were easier to build in wood than spherical bulbous domes, and thus possibly preceded the latter form.

From the study of architectural forms preceding the bulbous dome, we may conclude, therefore, that it was a combination of the egg-shaped dome and the pointed horseshoe vault. Egg-shaped domes presumably stimulated the development of the pointed horseshoe vault into the bulbous dome. The development took place in the stratum of wooden construction, although the first of the two contributing elements was derived from stone models.

A Russian eighteenth-century drawing represents the seventeenth-century wooden residence of the Stroganoffs, in Solvyegodsk, a town

- (21) J.Strzygowski, *Die altslawische Kunst* (Augsburg, 1929) suggests the questionable theory that Iranian fire-temples were the models of Russian and other domed churches, but Brunov, in M. Alpatov and M.Brunov, *Geschichte der altrussischen Kunst* (Augsburg, 1932) I,3-5, sees a Byzantine origin of the earliest wooden churches, but fails to recognize the continuity of tradition established in wooden architecture.
- (22) D.R.Buxton, *Russian Medieval Architecture* (Cambridge, 1934) 36,37.
- (23) Early views in: I.Grabar, *History of Russian Art* (Moscow, 1909), II,243(Hilferding engraving of 1768); Alpatov, *loc.cit.*, II, fig. 100 (drawing by Quarenghi, (1744-1817)).
- (24) Grabar, *loc. cit.*, I, 403.
- (25) Grabar, *loc. cit.*, I, 405.

in northeastern Russia. The square tower supporting a ridged horseshoe vault or bochka, belongs to a building which includes details stemming from various periods. Seen from the front, the bochka must have looked almost like a bulbous cupola (Fig.12)(26).

In a miniature of the Gospel-Book of Dobrila (Velikiy Novgorod, or Volhynia, 1164) (Fig.13)(27), the church is only symbolized by an ornamental frame. For the first time, a bulbous dome, covered with shingles, crowns the church (28). It is uncertain whether a wooden or stone building is represented. However, later pictures of churches with bulbous domes doubtless represent wooden buildings. The title page of a Psalter written probably in Smolensk in 1325-1350 and now in the Public Library at Leningrad (29), shows a conventionalized wooden framework decorated with an ornamental finial which seems to represent a bulbous cupola. Obviously the picture illustrates a wooden church. In another Psalter in the Public Library at Leningrad, also of the fourteenth century, there is a title page with a similar picture (30). The middle cupola, of the three illustrated, is decorated with interlacing patterns. There are several title pages of fifteenth-century manuscripts written in Novgorod which show churches decorated with bulbous domes and with animal interlacing patterns. They illustrate wooden churches of a Russo-Scandinavian type, which were to be seen in North Russia, but have disappeared (31). The dates of the manuscripts' illustrations must be earlier than the appearance of the bulbous dome in the wooden architecture of Russia. We can conclude from them that the development of the bulbous dome took place before the twelfth century in a stratum of wooden architecture which included Russia.

In Russian churches are found the so-called Czar's Place, a throne covered with a wooden pavilion, the canopy of which supports a pyramid crowned with a bulbous cupola. The Cathedral of St. Sophia at (Velikiy) Novgorod contains a Czar's Place of the sixteenth century (Fig.14); the church of St. Nicolas at Jaroslavl has an example of the seventeenth century (32). Very probably they were preceded by similar wooden structures of an earlier date.

- (26) M. Lagovsky, "The House of the Stroganov in Solvycegodsk," (Review of the Society for the Study of Russian Estates, 1928, no. 7-8, 49-51). Grabar, loc.cit., II, fig. 309, illustrates the seventeenth-century stone water reservoir, called the Falcon Tower, which belonged to the Kolomenskoye Castle. Its curved wooden saddle-roof, however, lacks bulging sides. For a similar structure in a Byzantine mosaic, see T.W. Arnold, Painting in Islam, (Oxford, 1928) pl. 24, Annunciation, San Marco, Venice. An Indian tower with a similar roof is illustrated in a Relief from a Stupa at Amaravati (Diez, loc.cit., fig. 104). Rivoira, loc.cit., 153, states that from the horseshoe arch developed the bulbous cupola, but does not particularize.
- (27) W. Born, loc.cit., second part, 97, 107, pl. III, 1.
- (28) Nekrasov, loc.cit., 262, 263, states that the lower part of the pinnacle includes a row of windows. He tentatively, but not convincingly, interpretes the bulbous form of the pinnacle of the miniature as a purely ornamental design inherited from Sasanian Persia.
- (29) Born, loc.cit., first part, 68, second part, 89-91, 99-103.
- (30) Nekrasov, loc.cit., 165, fig. 84.
- (31) Born, loc.cit., first part, 84.
- (32) G.K. Lukomskij, Russkaja Starina (Russian Antiquities), (Munich, 1923) fig. 87; Buxton loc.cit., fig. p. 49.

Some miniatures of the Baghdād school offer an opportunity to trace the pavilion crowned with a bulbous cupola in the Mohammedan near East. In a manuscript of the Makāmāt of Ḥarīrī, written and illustrated in ca. 1230, two boats are represented which are decorated with canopies; the canopies are covered with a bulbous cupola and a bulbous finial respectively (Fig. 15) (33). Shipbuilding was a craft belonging to the stratum of wooden construction.

Covered wooden staircases, leading to covered platforms (kryltso) were characteristic of the Russian peasant's dwelling (izba) (34), and appeared in wooden churches in a more advanced form, and here were usually covered by a bochka, as illustrated by the Church of St. Nicolas the Wonderworker, at Panilovo, ca. 1500 (Fig. 16) (35). The platform with the bochka recalls the appearance of a pavilion crowned with a bulbous cupola. The kryltso is a kind of balcony, and similar balconies were developed in the northern Indian area near the forested Himalayas. As early as in the second century, B.C., the wooden balcony was a favorite element in Indian architecture, and spread from this country in various directions (36). Stone balconies were seen in Pompeian frescoes. Wooden balconies of the type developed in India are said to have reached the Mediterranean area in the twelfth century, probably through Baghdād. They must have reached Russia much earlier.

Miniature bulbous cupolas are to be found on the roofs of Egyptian mimbars inside the mosques and madrasahs. The mimbars were originally made of wood and "elaborately carved and inlaid to emphasize their importance in Muslim worship" (37). The oldest remaining mimbar is in the Mosque of Kairawān, Tunis. It dates from the ninth century and consists of a simple flight of steps, without either a portal at its bottom or a pavilion on its top (38). The mimbar of the Mosque al-Aksā in Jerusalem, constructed in 1168, has a portal and a canopy, but the latter is decorated with a hexagonal pyramid (39). A mimbar, decorated with a pyramidal roof and built, according to an inscription, in 1155 by an Armenian craftsman, is in the Mosque of 'Alā'ed-Dīn in

(33) P. W. Schulz, Die persisch-islamische Miniaturmalerei, (Leipzig, 1914) II, pl. 7.

(34) Buxton, loc. cit., pp. 34, 37.

(35) Grabar, loc. cit., I, pl. p. 362.

(36) De Beyliā, loc. cit., 50-71.

(37) A. S. Briggs, Muhammedan Architecture in Egypt and Palestine, (Oxford, 1924) 216.

(38) H. Saladin, L'architecture, Manuel d'art musulman (Paris, 1907), I, 361, fig. 257.

(39) Briggs, loc. cit., 216, erroneously attributed a bulbous cupola to it, and E. Diez, in his article mimbar, in: The Encyclopedia of Islam (Leiden and London, 1926) III, 499-500, followed him.

Diez also suggests that the canopy of the mimbar may have originated in India. The stone mimbar of the Mosque of Hilāl Khān Kādī in Dholka which he cites dates from 1333 and has a pyramidal roof of Hindu design. The pavilion is a favorite motif in India and has contributed perhaps indirectly to the development of the mimbar outside of India, together with the balcony (see above). The mimbar of Dholka is illustrated in J. Burgess, "Muhammedan Architecture in Gujarat" (Archeological Survey of India, XXIII, Western India, VI, London, 1896, 31, pl. 28, 230).

Konya, Asia Minor(40). Pyramid roofs are typical features of Armenian churches. The pyramid form of the roofs of minbars frequently found in the mosques of Istanbul and other Turkish places, including the later Egyptian examples of the Ottoman period, was possibly introduced from Armenia during the Seljuk period.

The earliest remaining minbar decorated with a bulbous cupola was installed by Sultan Lājīn in 1296 in the Mosque of Ibn Tūlūn in Cairo(41). During the Mameluk period, this type of minbar became very popular and subsequently has undergone only slight changes, such as the decoration of the finial with stalactites, and some variations in the outline of the cupola which sometimes approximates a globe(42).

The minbars of the so-called "Blue Mosque" of Amīr Aksunkur or Ibrāhīm Aghā (1364), of the Madrasahs of Amīr Shaykhū(1365) and Sultan Ḥasan (1356-1363)(Fig.17), and of the Mausoleum of Barkūk(1400-1410) are of stone, but closely emulate wooden models. Other wooden minbars are to be found in many Egyptian mosques and madrasahs, including the Madrasah Barkūk Intra Muros, 'Abd al-Ghanī (1418), in the Mosque of Shaykh (1413-1420), in the Madrasah Abū-Bakr ibn-Muzhir (1479-1480) (43). In the Victoria and Albert Museum, there is a minbar also dating from the reign of Kā'itbey(44). After the Turkish conquest, the form and decoration of the minbar changed and its execution was less ornate; but as late as 1616-1625 a fine minbar in the Mosque al-Burdaynī at Cairo was installed and was capped with a bulbous cupola(45). The Bahrid Mameluks (1250-1382) who introduced minbars decorated with bulbous cupolas into Egypt, were of Turkoman origin and are therefore credited with an Asiatic tradition in art.

So far we have discussed the diffusion of the bulbous dome and cupola in the wooden architecture of the Near East and of Eastern Europe. In the following paragraphs we shall trace its development in monumental stone architecture.

Wooden minbars were imitated in stone at an early date, and the stone minbars probably formed connecting links between interior decoration and architecture.

In Egypt, until the beginning of the fourteenth century, minarets in Cairo were crowned with stilted and fluted cupolas called mabkhārahs (censors). From ca.1330 pinnacles appeared which were crowned with spindle-shaped bases which served as miniature drums for small bulbous cupolas, as illustrated by the minarets of the Mosque al-Azhar in Cairo and many other examples (Fig.18)(46). These cupolas

(40) H.Löytved, Konia, Inschriften seldschukischer Bauten, (Berlin, 1907) 22.

(41) Briggs, loc.cit., 216; L.Hautecoeur et G.Wiet, Les mosques du Caire (Paris, 1932), II, pl. 85

(42) The minbar of the Haram at Hebron (al Khalīl) shows an egg-shaped cupola typical of Syria, without a base. The minbar dates from 1091-1092, but the canopy seems to be an addition made in the first half of the fourteenth century. Vincent, loc.cit., 222.

(43) Hautecoeur et Wiet, loc.cit., II, pl. 113, 119, 132, 157, 149, 172, 200, 210.

(44) G. Migeon, Manuel d'art Musulman (Paris, 1927), II, 320, 321, fig. 131.

(45) Hautecoeur et Wiet, loc.cit., II, pl. 233.

(46) K.A.C. Creswell, "The Evolution of the Minaret, with special references to Egypt," (The Burlington Magazine, LVIII, 1926, 357, 358, 296).

are of stone and their sides form slightly reversed curves. This motif has been variously interpreted. It was called *kulāh*, a Persian cap, in the near East, and this word has been confused with *kullah* a water jug. Therefore the finial was thought to be a copy of a headwear or a bulbous pitcher. Others have considered the puzzling motif a copy of a dome(47).

The earliest minarets decorated with bulbous finials were on the mosques of Ulmas (1330) and Bashtak (1335). The mosques al-Māridānī, (1340) and Shaykhūn (1349), and the Madrasahs of Amīr Sargitmish (1336) (48), of Sultan Hasan (1356-1363)(49), Tatr al-Hagazīyā (1360) and Sultan Sha'bān (1368-1369) continued this motif. The general design of the minarets in Egypt emulated Syrian prototypes with the exception of the bulbous cupolas which were unknown in Syria at this period(50).

All the minarets just mentioned date from the period of the Bahrid Mameluks. During the subsequent period of the Circassian Mameluks (1382-1517), bulbous finials remained in favor and became somewhat more slender. Among many examples, the minarets of the Madrasah of Barḳuḳ (1386), the mosques of Kā'itbey(1475) and al-Azhar (1510-1516) may be cited as typical. One of the minarets of the latter has coupled finials, and that of the Madrasah al-Ghurī (1503) shows four small bulbous finials surrounding a taller one in the center(51). The arrangement recalls Russian churches with five bulbous domes. Minarets decorated with bulbous cupolas are found frequently in provincial towns in Egypt (52), and eventually spread to Syria. Sultan Kā'itbey added the upper story to the southwestern minaret of the mosque of Walīd at Damascus, crowning it with a bulbous cupola(53). The minaret al-'Arūs (eleventh and twelfth centuries) was decorated with a similar pinnacle of Egyptian design in the eighteenth century(54).

The oldest building remaining in Syria which is covered today with a bulbous dome is the Kubbāt al-Ṣakhrā at Jerusalem, erroneously called Mosque of Omar and known since the Middle Ages as the Dome of the Rock(Fig.19). Its outline is only slightly bulging and its point very low. On the whole, it resembles more an egg-shaped than a bulbous dome. Built in 691, the mosque has undergone many alterations. The shape of the dome is allegedly the original one, but it is known that the dome was rebuilt in 1021-1022 after a collapse(55). It consists of two layers of wood which leave an empty space between them. A piece of timber built into the outer dome bears the date of the construction of the dome, 1019(56). The earliest illustration of it ap-

(47) Hauteceur et Wiet, loc.cit., I, 289; K.Wulzinger and G.Watzinger, *Damascus, Die islamische Stadt* (Leipzig, 1924).

(48) Creswell, loc.cit., pl. 3H, K. L.

(49) Hauteceur et Wiet, loc.cit., pl. 125.

(50) Creswell, loc.cit., 296.

(51) Hauteceur et Wiet, loc.cit., II, Pl. 146, 191, 236, 209.

(52) H.Thiersch, *Pharus, Antike, Islam und Okzident* (Leipzig, 1909) 121, figs. 96, 146.

(53) Rivoira, loc.cit., 92.

(54) Thiersch, loc.cit., 121; Briggs, loc.cit., fig. 16.

(55) K.A.C. Creswell, "Early Muslim Architecture" (Oxford, 1932) I, 66; Ibid., 83; "The wooden dome appears to have had its origin in Syria;" of Rivoira, loc.cit., 58, 59.

(56) E.T. Richmond, in *His The Dome of the Rock in Jerusalem* (Oxford, 1924) 13, states that "the actual dome is probably later in its construction though containing material from the earlier dome."

appears on the seal of the Templars, and thus it dates back to the twelfth century. This seal and representations in early fifteenth-century European paintings show much more bulbous outlines, but these are not true to nature(57). The egg-shaped dome which originally covered the Umayyad Mosque in Damascus is considered to have been an imitation of the Dome of the Rock. If this assumption is true, the dome of the Kūbat al-Sakhrā was also probably egg-shaped originally. At any rate, it is not certain how it looked originally, and we cannot claim the Dome of the Rock as a reliable example of a bulbous dome in the Umayyad period. Probably it received a bulbous dome in the eleventh century.

Some pictorial representations of bulbous domes and cupolas are to be found in both Islamic and Christian mosaics and manuscripts in Syria. The oldest of the mosaics referred to are in the court of the Umayyad mosque at Damascus(58). They were installed under the Caliph al-Walid I. in the beginning of the eighth century and show fanciful buildings and landscapes which probably symbolize Damascus as an earthly paradise. Two towers support bulging cupolas; one of them is plain and almost spherical, the second is fluted and bulbous(59). So far, the bulbous cupola is isolated in its period and possibly created by the mosaicist who dealt playfully with its motifs: "C'est cette ville de rêve, semblable au paradis d'Allah, qui plus que la cite réelle, a tenté l'imagination des peintres, comme elle tentait celle des poètes. Et c'est elle qu'ils ont su représenter."(60)

After the beginning of the Crusades representations of bulbous domes appear more frequently. In the Latin Psalter of Melisenda, daughter of Baldwin, king of Jerusalem, is a representation of the Temptation of Christ which includes a square temple decorated with a fluted, bulging and seemingly pointed dome supported by a flat roof(61). In the

- (57) M. de Vogüé, *Les églises de la Terre Sainte* (Paris, 1860) fig. p. 290; Le Comte P. Currieu, "Une vue de l'église du Saint-Sépulchre vers 1436, provenant du Bon Roi René, (in "Florilegium ou recueil des travaux d'érudition dédiés à monsieur Le Marquis Melchior de Vogüé," Paris, 1909, 206, 207, pl. 200); N.I. Friedländer, *Die altniederländische Malerei* (Berlin, 1924) I, 167 and pl. 31; M. Conway, *The van Eycks and their Followers* (London, 1921) 61; F. Rosen, *Die Natur in der Kunst* (Leipzig, 1903), figs. 41, 42; A. Grisebach, "Architektur auf niederländischen und französischen Malereien des fünfzehnten Jahrhunderts," (Monatshefte für Kunstwissenschaft, V, 207 and 254); P. Molmento and G. Ludwig, *The Life and Works of Vittorio Carpaccio* (London, 1907), 38-40, 105, 134, figs. 125, 126, 127, 129.
- (58) De Lorey, *loc. cit.* 326-348.
- (59) De Lorey, *loc. cit.* 341. Creswell, *loc. cit.* (History and Evolution of the Dome in Persia) 241, took it to be a "spirally fluted" dome of a later Russian type. In this case the motif must be attributed to a restoration carried out after the sixteenth century. For only then spirally fluted domes appeared in Russia. It seems improbable that the mosaic was restored as late as that.
- (60) J. Lassus, "Note sur les mosaiques de Jérusalem et de Damas" (Bulletin d'études orientales et de l'Institut Français de Damas, T. III, 1933, 41).
- (61) London, British Museum, Egerton 1139; Dalton, *loc. cit.*, 471-473, fig. 28; T.S.R. Boase, "The arts in the Latin Kingdom of Jerusalem" (Journal of the Warburg Institute, II, 1938, 1939, 14, 15, pl. 3c)

representation of Christ's Entry into Jerusalem another bulbous dome appears in the background. The Psalter was written probably between 1131-1144.

Another representation of a bulbous dome appears in the mosaics of the Church of the Nativity at Bethlehem which, according to an inscription, were made in 1169 by one Ephraim, probably under the reign of King Amaury of Jerusalem in the time of the Emperor Manuel Comnenus. The available reproductions of the mosaics are not exact; they are partly old engravings, partly recently painted copies which contradict each other. The fragments of the mosaics in the north wall of the nave include two conventionalized domed churches, remaining from seven which symbolized the oecumenical and provincial councils. The church which refers to the council of Antioch shows two small fluted and seemingly pointed cupolas supported by turrets (62). In a section of the mosaics of the Umayyad Mosque at Damascus, which owes its present appearance to a thirteenth-century restoration, two bulbous cupolas appear. They are supported by flimsily constructed, square pavilions (Fig. 20) (63). A stone fountain in the form of a pavilion crowned with a bulbous dome was built by the Sultan Kā'itbey in 1482 in Jerusalem. Its style is not Syrian; its bulbous form recalls the finials of Egyptian minarets and its decoration recalls that of the domes of Mameluk mosques in Egypt (64).

Except for the examples listed above, careful search has revealed no other publications of Syrian bulbous domes. If we interpret the pictorial representations and monuments correctly, Syrian bulbous domes came from small wooden structures and gradually developed into monumental architecture in the eleventh and twelfth centuries.

Several early Russian stone churches, such as the Neredita near (Velikiy) Novgorod, built in 1189, today possess bulbous domes, but the present form of these is due largely to later alterations and restorations which were necessary about once every 100 years and were

(62) R. Weir Schultz, *The Church of the Nativity at Bethlehem* (London, 1910) 36, 37; *m. De Vogüé, loc. cit., pl. 4*, engraving by Ch. Sauvaget. The engravings in de Vogüé's book differ from the copies reproduced by Schultz. Not only the outlines of the bulbous domes differ, but also the church of Sardica next to Antioch is covered with a swollen, shingled, but unpointed, dome in de Vogüé's engraving, and with a shallow, but not swollen, dome in Schultz's book. On p. 47 and pl. 2, Schultz reviews and illustrates a mosaic of Christ's Entry into Jerusalem which shows a bulbous cupola supported by a porch in front of the city gate. In de Vogüé's illustration of the same mosaic (pl. 5) the buildings of the city are different and there is no cupola at all on the gate. On an engraving of the Italian, J. Campini, in 1693 which is reproduced by Schultz, *loc. cit., pl. 25*, the row of churches is to be seen in its complete, undamaged form; the churches are represented here with domes and cupolas which show neither a bulging nor a bulbous form.

(63) De Lorey, *loc. cit.*, 347.

(64) J. Sauvaget, "L'architecture musulmane en Syrie" (*Revue des Arts Asiatiques*, 1934, VIII, 20, pl. 13 b). The same edifice is illustrated under the name of the Tomb of Elijah, in Le Dr. Lortet, *La Syrie d'aujourd'hui* (Paris, 1884) 281.

carried out in accord with the taste of the time(65).

A title page of a Psalter written in Kiev in 1397, now in the Public Library of Leningrad(66), shows a conventionalized church decorated in the Byzantine style and thus indicates that it represents a stone building. The church has three bulbous domes. A simpler and more naturalistic version of the same design appears in the East Russian Psalter of Uglich (1485) (67)(Fig.21).

In addition to manuscripts, some early icons bear evidence to the appearance of bulbous domes. A fourteenth-century Novgorod icon, the Glorification of Our Lady, now in the museum of (Velikiy) Novgorod, shows a high stone church decorated with five bulging, little pointed domes and a bulbous semi-dome(68). Another north Russian icon of provincial origin, from the end of the fourteenth century, illustrates the Presentation of the Virgin, and shows a bulbous cupola on the top of a stone building (69). In the fifteenth century, bulbous domes and cupolas frequently appeared in icons of the Novgorod school(70), and later spread to other schools.

Early Russian stone churches have shallow and sometimes pointed domes (shlem = helmet), following Byzantine and Persian models. On the strength of the evidence of pictorial representations, the development of the bulbous dome (loukovitsa = onion) from the stratum of wooden architecture must have preceded the fourteenth century in Russia perhaps by a hundred years and more.

In 1240 the Tatars conquered Russia and for more than two centuries dominated it, except for (Velikiy) Novgorod, which formed a flourishing free state that to a considerable degree broke away from the cultural dependence on Byzantium. At Novgorod, there developed a regional style which exploited strongly bulbous domes(71). In the battle of Kulikovo in 1380, the Tatars were beaten for the first time, and the Golden Horde was destroyed in 1480. In 1470, after Ivan III conquered Novgorod, Moscow became the center of a growing empire and the focus of its artistic culture. The new art of the Russian Empire was synthetic. Novgorod contributed many elements to it, including its form of the bulbous dome which was distinguished by a reversed

(65) Buxton, loc.cit., 20, dates the appearance of bulbous domes in stone churches in the twelfth century. N.P.Kondakov, The Russian Icon (Oxford, 1927) 78, 79, states that Novgorod masonry churches were built "in an unbroken series from the years 1108-1445," and that "meanwhile side by side with the masonry churches went the construction of a great number of wooden churches sometimes with many domes." For the Nereditsa, see Alpatov, Brunov, loc.cit., I, 63. For bulbous forms of domes, see L.Reau, L'Art Russe, (Paris, 1921) I, 131. Kondakov, loc.cit., pl.79, states that wooden domes "retranslated into masonry gave rise to the wonderful architecture of the sixteenth and seventeenth centuries."

(66) Born, loc.cit., first part, 75, 76.

(67) W.Stasow, L'Ornement Slave et Oriental (St.Petersbourg, 1887), 33, pl.88, 1.

(68) Alpatov, Brunov, loc.cit., I, 316.

(69) O.Wulff und N.Alpatoff, Denkmäler der Ikonenmalerei (Hellerau bei Dresden, 1925), fig. 35.

(70) Battle between Novgorod and Sussdal, Wulff und Alpatoff, loc.cit. fig.71.

(71) Brunov, in: Alpatov, Brunov, loc.cit., I, 87, dates the development in the beginning of the fifteenth century. This is too late.

curve outline, and it was this type that became the outstanding feature of Russian architecture through the centuries.

It has been stated erroneously that the Tatars had introduced the bulbous dome into Russia(72). The first "Tatar" (gadroned) bulbous dome, however, was built in 1385 in Shāh Sinda, the burying ground of Samarkand and crowned the Mausoleum of Shirin Bika Aka(73). In the city of Turkestan, the former Kasei, Tīmūr built in 1397 a mausoleum for the (Saint) Hasret Ahmad Yassawi. The architect was the Persian, Hodja Husayn, from Shīrāz. One of the domes of the building is bulbous. The bulbous domes of Samarkand differ from Russian examples by their almost straight bulge and their fluted surface. This type is best termed a melon-dome, and it became an outstanding feature of the Tīmūrid architecture. In 1398-1405, Tīmūr built and decorated with melon-domes the Madrasah Bibi Khanūm, as a mausoleum for his wife, and in 1404 the Madrasah Gūr-i Mīr, later used as his own mausoleum(Fig.22)(74). All these buildings resemble the ruin Gunbad-i Sabz in Kirmān in Persia, which according to an inscription was allegedly built in 1242, and thus was considered the earliest extant bulbous dome, but is now dated in the fifteenth century(75). The dome of the ruin is split and its construction can be seen from the outside. It was built of brick and divided into compartments by thin buttresses which reduced the thrust exerted upon the inner vault beneath them. The melon-domes of Samarkand are constructed in the same way. Inspection has shown that, in addition to the radiating walls between the dome shells of Gunbad-i Sabz, a system of wooden ties in the shape of a wheel was fixed to a central axis supported on the inner dome(76).

The Tīmūrid melon-domes and the Gunbad-i Sabz on one hand, and the Dome of the Rock on the other hand, differ basically in their form and construction. The Syrian dome has double shells of wood which differ only slightly in their swelling; the Turkestan domes and the similarly constructed Gunbad-i Sabz are soaring brick structures which were erected above shallow brick interior domes. Thus the melon-dome cannot be directly traced back to the Syrian bulbous dome(77). The Persian shallow pointed dome in the form of a helmet preceded the

(72) J.Strzygowski, *Asiens bildende Kunst* (Augsburg,1930) 419,700, considers it Tatar and "a free finial" (freie Endigung) of a pole adapted to architecture by constructing it in the manner of a tent."

(73) E.Cohn-Wiener, *Turan* (Berlin,1930) 26, pl.36.

(74) Cohn-Wiener, *loc.cit.*, 29, pl.61; H.Glück and E.Diez, *Die Kunst des Islam* (Berlin, 1925) pl. XIV.

(75) R.Byron, "Timurid Architecture," in A.U.Pope (editor), *A Survey of Persian Art* (New York, 1939) II, 1129-1132: For the diffusion of the melon-dome cf. R.Byron, "Timurid Monuments in Afghanistan," (*Troisième Congrès International d'art et d'archéologie Iranien*). *Mémoires*, Leningrad 1935, Moscow 1939, 34-37).

(76) Saladin, *loc.cit.*, I, 361, fig. 27a.

(77) Creswell, *loc.cit.* (History and Evolution of the Dome in Persia) 148, states that Tīmūr must have seen the double dome of the Damascus mosque when he stayed there in 1400 before he burnt the city, and from this fact the author concluded that Tīmūr imitated it in his Samarkand buildings; but the melon-dome of the Mausoleum of Shirin Bika Aka antedates Tīmūr's stay in Damascus by fifteen years. Moreover, a far reaching development in art cannot originate from a casual contact with a foreign form, and even provided this was the case, a development in art needs time. Chaghtai, *loc.cit.*, 88-91, follows Creswell.

melon-dome in Turkestan. There is no evidence of a traditional wooden architecture in Turkestan, and it is impossible to say whether Turkestan shared the stratum of wooden construction which produced the bulbous dome. But the Tatars must have seen bulbous domes on wooden and perhaps stone churches in Russia which antedated Tīmūr's buildings. Russian bulbous domes were soaring structures like the Tīmūrid domes. It is true, they were made of wood; but very probably they have stimulated the development of the melon-domes in Turkestan in spite of being of different material.

Disregarding the Gunbad-i Sabz which seems to be an outpost of the school of architecture of Samarqand, the Mosque of Gawhar Shād in Meshed, built in ca. 1405-1419, was the first building, now standing in Persia proper, to be decorated with a bulbous dome(78). At this time the new form had already been established in Russia and Turkestan. Probably under the influence of monuments abroad the Persian shallow pointed dome developed into a bulbous dome. Persian domes, however, fail to imitate the straight bulge of the melon-dome or the reversed curved outline of the Russian onion-shaped dome. They have harmonious and quiet forms.

In 1451 Amīr Malik Shāh erected the Masjdīd-i-Shāh in Meshed which was covered with a dome similar to that of the Mosque of Gawhar Shād (79). From this time, the new form was gradually adopted in Persian architecture. Contemporary Persian book-miniatures reflect the growing popularity of the bulbous dome(80). In the seventeenth century, the Persian type of bulbous dome was fully developed. In its decoration, it is distinguished from the shingled Russian and the fluted Turkestan domes by surface patterns carried out mostly in colored tiles (81). In 1616 under Shāh Abbās, the Masjdīd-i-Shāh in Isfahān was built and decorated with a magnificent bulbous dome (Fig.23). It was followed by the Shrine of Kadam-Gāh at Nīshāpūr, and in 1700-1714 by the Madrasah Māder-i-Shāh in Isfahān. In 1834, the tomb of Shāh Chirāgh at Shīrāz was rebuilt and decorated with a most extravagantly bulbous dome(82).

In India(83) the same type of dome appeared under the Mughal dynasty which was founded in 1526 by Bābur, a descendant of the House of Tīmūr. As is well known, Mughal art is Persian art grafted on Hindu traditions and flavored by central Asiatic tendencies. In 1572, the great Akbar erected the first mausoleum of a Mughal emperor, that of Humāyūn. It is covered with an enormous, slightly bulbous dome(Fig.24). The central dome of the Taj-i-Mahall in Agra, built by Shāh Djahān

(78) Byron, *loc.cit.*, 1124; V, pl. 436.

(79) E.Diez, *Die Kunst der islamischen Völker* (Berlin-Neubabelsberg, 1915) 93, 94, Fig. 127.

(80) Some early examples are illustrated in; Pope:*loc.cit.*, V, 951, Tabriz school, early fifteenth century; 860, Shīrāz school, 1410; 861, B, Shīrāz school, 1410 (roof of a tent); 883, B, Herāt school, 15th c.

(81) As late as in 1610 the Madrasah Shīr Dār was decorated with a melon-dome in Samarkand. Creswell, *loc.cit.*, (History and Evolution of the Dome in Persia) pl. 3 D.

(82) A.U.Pope, *loc.cit.*, II, 1181, IV, pl. 488; II, 1213-1215; IV, pl. 503; II, 1217, IV, pl. 508 D, II, 1185-1189, IV, pl. 465.

(83) A.U.Pope, "Some Interrelations between Persian and Indian Architecture," (*Indian Art and Letters*, New Series, IX, 2, 101-126).

in 1631-1658, is also bulbous. The Mausoleum of Ibrāhīm II, built in Bidjāpūr a little earlier, showed a central bulbous dome and four similar small cupolas on its minarets. The Djāmi 'Masdjid at Delhi, built in 1644-1659 by Shāh Djahān, was decorated with three giant bulbous domes of white marble with black stripes (84). There are many more examples of bulbous domes in Mughal architecture. Most of the domes are surrounded by circles of lotus leaves which suggest a symbolic interpretation of the bulbous dome as a lotus bud. The lotus symbolism goes back to the earliest times of Indian culture. The Hindu himself had created the bulging cupola and the ridged horseshoe vault. The soil was prepared for the introduction of the bulbous dome in India, where once had developed the elements from which the new form sprang (85).

Conclusion

The bulbous dome originated in a stratum of wooden architecture which extended through India, the near East, and Russia. Its evolution is based on two elements of Indian architecture: the bulging, but unpointed, stone cupola of the stupa and the ridged horseshoe vault of the wooden chaitya halls. A fusion of the two elements in wooden constructions probably took place between the seventh and the eleventh centuries A.D. outside of India, and was stimulated by coexistent non-bulbous domes. Since the eleventh century, regional forms of the bulbous dome were gradually developed for the decoration of monumental stone buildings. Syria seems to have led the evolution. Russia followed probably in the thirteenth century or earlier, Turkestan in the fourteenth, Persia in the fifteenth, and India in the sixteenth centuries. Bulbous cupolas appeared on wooden mimbars in Egypt in the thirteenth century and were imitated in the decoration of Egyptian minarets in stone from the fourteenth century onward.

(84) Havell, loc.cit., (Handbook) 127-145, pl. 42 B, 50 A, 49 B, 51 A.

(85) A paper on "The Introduction of the Bulbous Dome into the Gothic Architecture and its Subsequent Development" will appear in Speculum.

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DEATH OF SIR EDWIN LUTYENS, continued from page 15.

assistance to the Imperial War Graves Commission, and designed the beautiful Cenotaph (1919-20) in Whitehall. Though a Protestant, he was chosen in 1933 to design Liverpool's Roman Catholic Cathedral which, when completed a century hence, will exceed in area St. Peter's, Rome, and for which he coined the stylistic designation, Wrenaissance!

Associate of the Royal Academy in 1913, full member, 1920, and president in 1938, knighted in 1918, K.C.I.E., 1930, he received in 1921 the RIBA gold medal, and in 1925 the gold medal of the A.I.A. Coming to New York to accept this latter honor, Sir Edwin took a vigorous and pessimistic view of the metropolis' aesthetic chaos, and two years later, misled by reports of corroded steel work found during the wrecking of old Madison Square Garden, created a mild sensation by his wishful prediction that American skyscrapers would soon collapse. In 1928, RIBA criticism of his work on the Charing Cross Bridge development, led him to withdraw and organize his own Institute of Registered Architects.

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HISPANIC FOUNDATION CORRECTS THE JOURNAL

Rarely has this editor submitted to correction more willingly than upon the receipt of the following rejoinder to our last issue's News Item concerning the Rockefeller Foundation Grant for the expansion of the Archive of Hispanic Culture being developed by the Hispanic Foundation at the Library of Congress. Not satisfied with just reading about this magnificent work, he journeyed down to Washington and saw with his own eyes the comprehensive and methodical accomplishment already achieved in the field of Latin American architecture. How erroneous were our fears, Dr. Smith's letter eloquently details.

"I have read with a good deal of interest the reference in the July issue of the Journal of the American Society of Architectural Historians to the recent grant made by the Rockefeller Foundation to the Archive of Hispanic Culture of the Hispanic Foundation in the Library of Congress. I was puzzled by the following statement: 'Although this project seems to deal solely with Latin American painting, it does perhaps give architectural historians a legitimate hope that a similar archive for buildings may some day be accumulated to facilitate the preparation of a comprehensive history of Latin American architecture. But you had already quoted our announcement that we were collecting photographs of colonial chapels and of modern Latin American office buildings!

"It gives me great pleasure therefore to dispell this misapprehension and assure the Journal and its readers that we are collecting photographs of all aspects of Latin American architecture from the conquest to the present day. Indeed at least a third of our own 7000 photographs have to do with architecture, altho we also collect apart from painting, photographs and slides of the sculpture, minor and folk arts, and graphic arts of the Latin American republics.

"We have now an outstanding collection of material bearing on the colonial architecture of Brazil, Peru, Cuba, Panama, Guatemala and Nicaragua. We already have an important Argentine section including measured drawings of some of the great 18th century buildings of Buenos Aires and Cordoba. Recently an exchange arrangement has been set up with the Academia Nacional de Bellas Artes of Argentina which will bring us their collection of fine photographs of colonial buildings and their furnishings. Through arrangements now under way our Mexican collection will be extensively augmented especially in the kodochrome field. Important new acquisitions have been secured in Venezuela and Columbia. Photographers are at work for us in Bolivia. Our collections of architectural photographs from Uruguay, Paraguay, Chile, Haiti, the Dominican Republic, and Ecuador, while in most cases representative, are now being added to by a travelling representative in Latin America. We have a small collection of old photographs of Latin American buildings of great value for the study of lost or modified architecture.

"The collecting and documenting of photographs of Latin American art and architecture is but one aspect of the Archive's activity. Our Guide to the art of Latin America, which is now ready for publication, contains a carefully annotated bibliography of the subject with at least two thousand books and articles devoted to Latin American archi-

tecture of different periods. In this volume will be listed and described the architectural schools of Latin America, and the principal photographers, photographic archives and research institutions having material on local architecture. In addition the Archive supplied most of the information on Latin American architecture in the recent New World Guides to Latin America (Duell, Sloane & Pearce, 1943).

"The Archive of Hispanic Culture has an active program of exchange with institutions in Latin America. We have prepared specially selected sets of photographs and measured drawings of the early architecture of the United States from the H.A.B.S. material in the Library of Congress with texts in Spanish and Portuguese which have been distributed to many of the schools of architecture, and research institutions of Latin America. Through an article published last year in the Boletín de la Comisión Nacional de museos y lugares históricos of Argentina, the Archive made known the work of the National Park Service, the W.P.A., museums and private societies in the preservation of the early architecture of this country.

"As a result, the Archive is in constant touch with the outstanding architectural historians of Latin America, and those in Spain who are devoting themselves to the American colonial field.

"For all these reasons I think we are justified in feeling that an 'archive for buildings.....to facilitate the preparation of a comprehensive history of Latin American architecture,' already exists in the Archive of Hispanic Culture. Taken with the great collection of books on Latin American architecture and art in the Library of Congress, it offers formidable resources which are constantly being used by persons from all over the Americas interested in the accomplishment of architects in Latin America.

(signed)

"Sincerely yours,
Robert C. Smith
Assistant Director"

REVIEWS OF ARCHITECTURAL HISTORIES

Henry-Russell Hitchcock, In the Nature of Materials:
The Buildings of Frank Lloyd Wright, 1887-1941.
Duell, Sloan and Pearce, New York, 1942.

This is a most comprehensive and satisfying book. In fact it is the most complete survey of the works of Frank Lloyd Wright yet to be assembled in book form. To be sure, as the author points out, the examination of works of architecture on the pages of a book cannot be considered the equivalent of the actual examination of the works themselves. But when one has to count the cost of covering time and space to examine the originals, the book is the next best thing. If one will combine the use of this book with an examination of the more important works of the architect, something very satisfactory will result.

It is now thirty-five years since this deponent began to study Mr. Wright's buildings. The first one visited was Unity Church in Oak Park, Illinois, then only two years old. The time chosen for the examination was during a Sunday morning service in order that the "temple" might appear under actual working conditions. There is nothing more forlorn or empty than an auditorium without people. Auditoriums are never meant to be seen in this condition. Following the services the premises were reviewed under circumstances that set forth Unity House and the other portions in the proper light.

The next year the Frederick Robie house on Woodlawn Avenue, Chicago, was "experienced" under equally propitious circumstances. From then on whenever possible the writer has collected experiences of Mr. Wright's craftsmanship. A very satisfactory sojourn with a Wright masterpiece was a three week's residence at the Imperial Hotel in Tokyo in 1930 at which time the reviewer had an opportunity to experience the building in all its aspects. One evening, while entertaining a group of Japanese architects, he was happy to learn that the building was considered "most appropriate" by them and that they thought it "essentially Japanese" in spirit. For the reviewer, it recalled the late Midway Gardens in Chicago. The public rooms and the bed chambers, with their scale stepped down to the stature of the Japanese and their Wright-designed "combination" furniture, were interesting indeed. The tile-lined bathtubs in the tan-colored bathrooms were then a new idea. But the Imperial, under the conditions then possible, was a glorious experience.

In paging through the earlier examples shown in this survey, one is impressed with the way in which some of these buildings, now nearly forty years old, preserve their freshness. To be sure some of them appear definitely dated, but other structures, like the River Forest (Illinois) Golf Club, the Larkin Co. Administration Building in Buffalo, New York, the Midway Gardens (were they still standing), the Martin House in Buffalo, and the Coenley House in Riverside, Illinois, appear as fresh as yesterday. And while one who examines the total span of Mr. Wright's work, will observe some unevenness of artistic merit, no one can say that down to date any general deterioration is to be noted. The best of Mr. Wright's current work is as virile and

as valid as the best of his work in any period after he emerged as a master. It is vastly important, therefore, that the author has arranged the buildings in chronological order.

The plan of the book is simple. The unfolding career of the architect dictated the divisions into which the author has divided his treatment. There are three main divisions: (1) the text discussing Mr. Wright and his work, (2) a chronological list of the architect's executed works and projects and (3) two hundred (8½" x 8½") plates of dated photographs, plans and diagrams of the buildings.

The text (100 pages) is divided chronologically. Part One deals with Mr. Wright's apprentice period in the studios of J.L. Silsbee and Adler & Sullivan; Part Two with Wright's emergence as an independent creative artist; Part Three with what might be called his "prairie years" when he gave so satisfactory a form to prairie structures; Part Four with the expansion of his work to other regions and other climes, particularly to California and Japan; Part Five with his textured concrete-block houses and the cantilevered skyscraper projects; and Part Six with his recent works, including the matchless Edgar J. Kaufman house at Bear Run, Pennsylvania. In each of these divisions something of an analysis and critical evaluation of the works is set forth.

While it is evident that the author, a professor in Wesleyan University, is an avowed Wright protagonist, he is restrained in his praise and generally dispassionate in his estimates of the architect's work. He states, however, that "it seems impossible that one man can have designed and built so many edifices which have entered the cannon of the world's great architecture." There are those to be sure who question that there are "so many." Ofcourse the time has not yet come finally to evaluate Wright and his place in the stream of architecture. Mr. Wright is still a going concern. With him creation is still in process. He is today building some most interesting projects. Professor Hitchcock believes he will give us still other great works. This book, complete to date, is then a sort of progress report on the works of the great modernist. From the standpoint of the student or critic, the comments given on many of the plates constitute one of the interesting features of the volume. The pleasing format is the work of Mr. Wright himself.

This volume, taken with two others in similar format from the presses of the same publishers, makes a great corpus of material about Wright. The others, "Frank Lloyd Wright on Architecture--Selected Writings 1894-1940," edited by Frederick Gutheim (1941) and "Frank Lloyd Wright--An Autobiography," (1943) are mainly about the architect, his life and philosophy. This book while in part biographical, is principally about the buildings. No student of American architecture or of modern architecture in general can afford to be without it. The author is to be thanked for including a good index, rare in such volumes, and the meticulous acknowledgments.

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Scheme of Classification

Bibliography
Periodicals
General: general histories, essays, exhibitions, views
Biography
Geographical: continents, countries, regions, towns, buildings
Chronological: period, century, year
Building Types: agricultural, commercial, residential, etc.
Structural: materials, structural systems, details, equipment
Aesthetic: organization patterns, details, ornament, decor, arts
Professional: arch. education, professional administration, econ.
Preservationism: damaged monuments, preservation, reconstruction
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- 320 —; La quinta Pueyrredón (early 19c.country house) by Jorge H. Lima. 62 il. mens.dwg.(Revista de arquitectura, B.Aires, v.28, p.130-58, Ap '43)
- 321 Florencia Varela; Laboratorio Investigaciones "YPF" en —. il (Revista de arquitectura, B.Aires, v.28, p.86-103, Mr '43)
- 322 Mar del Plata; Los hoteles en —. il(Revista de arquitectura, B.Aires, v.28, p. 203-35 Jn'43)
- 323 Santa Fe; Furst, J.M.: Arquitectura de —. Buenos Aires, 1939. 118 p. 68 pl.

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- 342 near East; The excavations of Telbeit museum. il (Annual of Am.Sch. of Oriental Research, v.21-22, 256 p. 1943)

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351 temporary houses; 1851 proposal for _____ from Hawthorne:
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- 369 historic monuments, Argentina; Mapas de ubicación de los monumentos históricos. il (Revista de Arquitectura, B.Aires, v. 28, p. 159-66 Ap '43)
- 370 protection; Arrangements made to protect ancient sites, historic parts of buildings, and works of art in Italy. (Archts. J. v. 98, p. xxi, 283 O 21 '43)
- 371 —; Cultural salvage; organization meeting by the American commission for the protection and salvage of artistic and historic monuments in Europe (Art Digest v.17, p.7 S '43)
- 372 —, Hadrian's wall, Haltwhistle, Northumberland; Ideology and archaeology. Editorial on Haltwhistle Rural Distr. Council's feeling in the matter of — repairs (C.Life Lond. v.94, p. 1028 D 10'43)
- 373 —; Quarrying Hadrian's wall (C.Life Lond. v.94, p.456 S 10 '43)
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- 375 restoration, Bath; Bath preservation trust...under consideration....for restoration of 18c. buildings of Bath destroyed by enemy action (Archts. J. v. 98, p. 303, O 28 '43)
- 376 —, London, Houses of Parliament; Rebuilding the House of Commons. Churchill speech, O 28 '43. (Archts. J. v. 98, p. 331, 346, xxxiv N 4 '43; comment p. 351 N 11 '43)

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WELCOME TO THE NEW JOURNAL OF A. I. A.

Although our journalistic youth--we have just lit four candles on a paper birthday cake iced with mimeo ink--should inhibit us from assuming too fatherly an air, still we have had thus far very few opportunities to welcome new colleagues to the esoteric realm of architectural publishing.

After six months of rumors, the new Journal of the American Institute of Architects has just sent forth its first number, that of January, 1944. (It takes a bit of clairvoyance to announce this in the October, 1943, issue of the Journal of ASAH!) Time was when the old Journal of A.I.A. provided a rich banquet of articles covering in a very competent way both the practical and philosophical problems of the profession. Somehow within the roster of the Institute were found plenty of able and articulate members who were not afraid to tackle heady topics and share their celebrations with their fellows.

It was perhaps symptomatic of the intellectual doldrums into which architects and others fell during the inter-bellum period that the now deceased Octagon, successor to the old Journal, was never able, even if it had tried, to attract more than a handful of thought-provoking meaty essays. The Institute can rightly be accused of having defaulted on an important part of its leadership to the commercial architectural press which, despite the best intentions, could not really be expected to solve such fundamental issues.

No one will be naive enough to claim that the appearance of the Institute's new Journal will of itself turn the profession again into a mighty force ready to take its rightful place in post-war construction. But there is at last a forum where those who have the will to thrash out vexing problems can command an interested and, we hope, a responsive and valuable audience.

In this first issue, attractively presented in pocket-size format by Editor Henry H. Saylor, an excellent beginning is made. Walter R. MacCormack's plea for modern building codes challenges the profession to see that something is done about this national scandal. Col. William N. Taylor's "The Place of the Architect" should arouse much thoughtful discussion. The useful device of reprinting excerpts of important articles from other non-competing periodicals is excellent. Four half-tone plates are devoted to photogenic historical subjects. With congratulations on an auspicious inception, and sincere hopes for a long and increasingly influential career, we look forward to a day when in its pages we can see once more the spirit of enlightened inquiry and professional energy that radiated so incandescently in men like Soufflot, Soane, Rondelet, and Labrouste.

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NEW YORK CHAPTER MEETS

On Wednesday evening, January 19, 1944, the New York Chapter, ASAH, held its first meeting of the new year at the Institute of Fine Arts, New York University, 17 East 80th St. About 45 members and guests --from as far away as Providence, New Haven, Princeton, and Philadelphia--were called to order by chairman Talbot F. Hamlin. The principal business was the appointment of a Nominations Committee, composed of Dr. Karl Lehmann-Hartleben, chairman, Dr. Paul Zucker, and Mr. Roger Hale Newton, who will prepare a suitable slate for the next meeting when the chapter will be organized on a more formal basis. Mr. Newton is serving at present as acting secretary.

Mr. Thomas Macaughtry Judson, Curator of the Cicognara Collection of Maps at the Vatican spoke informatively on "The Role of Maps in the World's Progress from the time of Ptolemy to the Seventeenth Century." Sketching the correspondence between medieval conceptions of the world with monastic diagrams centered on Jerusalem, and the impulse given by commercial navigation and imperial exploration on scientific cartography, Mr. Judson illustrated his talk with selections from his unique collection of colored slides. He spoke of his discovery in Vatican archives of pre-Columbia knowledge of America, of the visit of Columbus in the 1480's to Reikjavik, Iceland, and his plan in 1492 to bypass the western lands by sailing a southern route. Beer and pretzels followed the animated discussion period.

Plans for spring meetings are now under consideration. They will include informal field trips.

Roger Hale Newton, Secretary.

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THORNTON SOCIETY NEWS

The Thornton Society at their September meeting elected the following officers for the year 1943-44: Lt. Charles E. Peterson, president; Mr. Charles C. Wall, vice-president; Miss Alice Lee Parker, secretary; and Mrs. Mangum Weeks, treasurer.

On November 16, 1943, the Society met at the Arts Club and heard an illustrated talk on "The Architecture of War," from prehistoric Maiden Castle to modern Willow Run, by Professor Turpin C. Bannister. He was introduced by Ensign John Coolidge, Vice-President of ASAH. Everyone present was incensed at the omission of the Pentagon building where rumor has it that there are underground vaults large enough to permit three mechanized divisions to hold full-scale cross-country maneuvers, and one corner of which houses a life-sized model of the whole District of Columbia, including the Pentagon itself.

The December 15 program was devoted to a survey of the work of the National Park Service in the preservation of historic buildings. Mr. Irving C. Root, Superintendent of the National Capital Parks, described the federal government's activities in this field, and Mr. Stanley E. McClure, Historian, the National Park Service, gave an illustrated talk on Washington sites under NPS care.

On January 23, 1944, members met at the Stephen Decatur Mansion, Lafayette Square, as guests of the owner, Mrs. Truxtun Beale. The house was built from designs by B.H.Latrobe. On display were a number

of working drawings, dated 1818, and now owned by Mrs. Beale. Lt. Marion V. Brewington, USNR, gave a sketch of Decatur's life, and Mrs. Beale gave excerpts from several architectural commentaries on the house. Members enjoyed refreshments and the opportunity to inspect the fine, old building at their leisure.

The next meeting will be held at "The Lindens," the mid-eighteenth century house which was moved to Washington in 1936 from Danvers, Mass. The owner and the architect will describe its history, emigration, recreation, and period furnishing.

The Thornton Society is growing steadily and can increase its usefulness in proportion to its size. Students and enthusiasts for early American architecture may take part in the society by sending 1944 dues of one dollar to Mrs. Weeks, at 925 S. Asaph St., Alexandria, Va.

Charles E. Peterson, president.

* * * * *

GREEK REVIVAL EXHIBITION AT THE MET

The Metropolitan Museum of Art, New York City, is devoting a major exhibition, open from November 9, 1943 to March 1, 1944, to "The Greek Revival in the United States." Perhaps its title should have been slightly modified to "Early Modern-American Architecture in the Grecian Idiom" to stress the point made by Mr. Talbot Hamlin that this phase was not so much a strict revival of a past system of decoration and construction as it was a conscious effort on the part of idealistic American designers to create a new and native idiom with which to resolve problems of formal expression.

The exhibition happily collaborates with two other notable events which should forcibly direct public attention to this important epoch in American cultural history. The first is the appearance of Mr. Hamlin's long-awaited "Greek Revival Architecture in America," just released by the Oxford University Press. The second event was the recent exhibition at Avery Library of Greek Revival Architecture, constituting a sort of panoramic survey of the illustrative material of Mr. Hamlin's book, but including many items foresworn to it because of space limitations. Together, these three important events will do much to reduce to a more just position the Colonial mania, so ubiquitous since the Centennial and Chicago Fairs.

The Metropolitan's show is delayed over-long. Since about 1925, the museum has owned a hoard of Greek Revival drawings by Alexander Jackson Davis done for both his own and his partner's, Ithiel Town's, architectural practice. It has taken nearly twenty years to make them accessible to public view!

Both at the Met and at Avery, photographs of actual buildings, many regrettably demolished, reveal how universal this Grecian idiom was from 1820 to 1860, how adaptable to circumstance and climate, and how creatively applied to every type of use. Far less often reproducing ancient prototypes than transforming them into a native vernacular, the mode achieved much more originality here than in Europe because American cultural ferment seems to have energized and liberated American architects to be bold and creative.

The exhibition's mounting is conservatively innocuous. The foyer of the suite contains ceiling-high photomurals of Girard College, several state capitols, and some houses which are framed by full-scale murals of selected entrance motifs. An unintentional incongruity came from the clash of life-sized costumed manikins posed against the under-life-sized murals, which were thereby robbed of much of their effectiveness.

One gallery was furnished as a handsome Greek Revival parlor. Another displayed adequate photographs of buildings grouped geographically; another, assembled by types of buildings. The piece de resistance of the show was, however, a whole gallery full of superb original architectural renderings of buildings and decorative details. The precise draftsmanship and elegantly restrained tinting of these documents should do much to educate modern architects to a higher standard of integrity and personal achievement. The exhibition's 48-page brochure (50¢) presents a judicious selection of exteriors, interiors, details, furnishings, sculpture, and costumes. Unfortunately, however, it lacks any listing of the exhibits, a feature that would give it great usefulness.

Here in this exhibition, as in a concentrated monograph, one feels the danger of too wholesale an emphasis upon one facet of a complex period. The Greek Revival was but the chief among several concurrent streams. It shared the scene with many Gothic works, and with a certain number of Tuscan and Egyptian structures as well. For all the fascination of the dominant theme, it was the rich and variegated tapestry that was reality. To forget this is to encourage nouveau intellectuals, and metropolitan "critics" who in a burst of opportunistic enthusiasm show supercilious disdain for barbarian minorities.

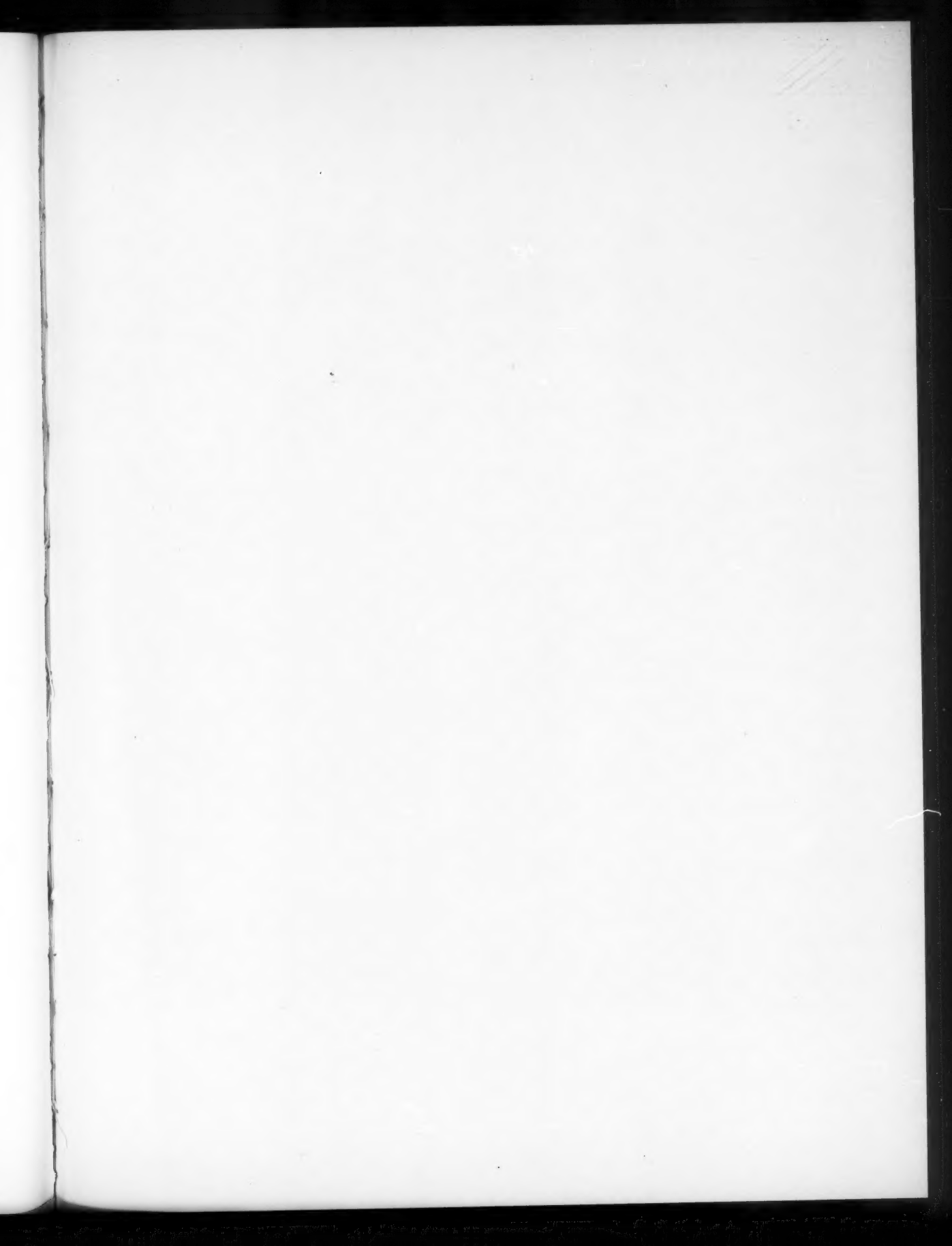
Nonetheless, this rewarding display shows a period of architecture peculiarly atune to the young, pioneering, idealistic, and utopian-dreaming nation, which was gathering its strength to conquer a continent. This architecture stems from eighteenth-century Romanticism, from which also grew Revolution and Democracy. This idiom, with its Gothic and Tuscan counterparts, characterizes a period reaching from the Revolution to the Civil War, a period of Classic culture, ideals, and sentiments which strove to create fine buildings worthy of its vision of Democracy, Freedom, and Equality. May we review it and absorb it to our own edification.

Roger Hale Newton

* * * * *

"Those who cannot
remember the past
are condemned to
repeat it."

Santayana



The first part of the report deals with the general situation of the country and the state of the economy. It is followed by a detailed analysis of the various sectors of the economy, including agriculture, industry, and services. The report concludes with a summary of the findings and a set of recommendations for the government.

The second part of the report provides a more detailed look at the agricultural sector. It discusses the various crops grown in the country, the methods of cultivation, and the challenges faced by farmers. It also examines the role of the government in supporting the agricultural sector and the impact of international trade on the industry.

The third part of the report focuses on the industrial sector. It describes the various industries in the country, including manufacturing, mining, and construction. It also discusses the challenges faced by the industrial sector and the role of the government in promoting industrial development.

The fourth part of the report deals with the services sector. It discusses the various service industries in the country, including retail, finance, and health care. It also examines the challenges faced by the services sector and the role of the government in supporting the industry.

The fifth part of the report provides a summary of the findings and a set of recommendations for the government. It discusses the overall state of the economy and the challenges faced by the country. It also provides a set of recommendations for the government to improve the economy and the living standards of the population.

The report concludes with a final summary of the findings and a set of recommendations for the government. It discusses the overall state of the economy and the challenges faced by the country. It also provides a set of recommendations for the government to improve the economy and the living standards of the population.

